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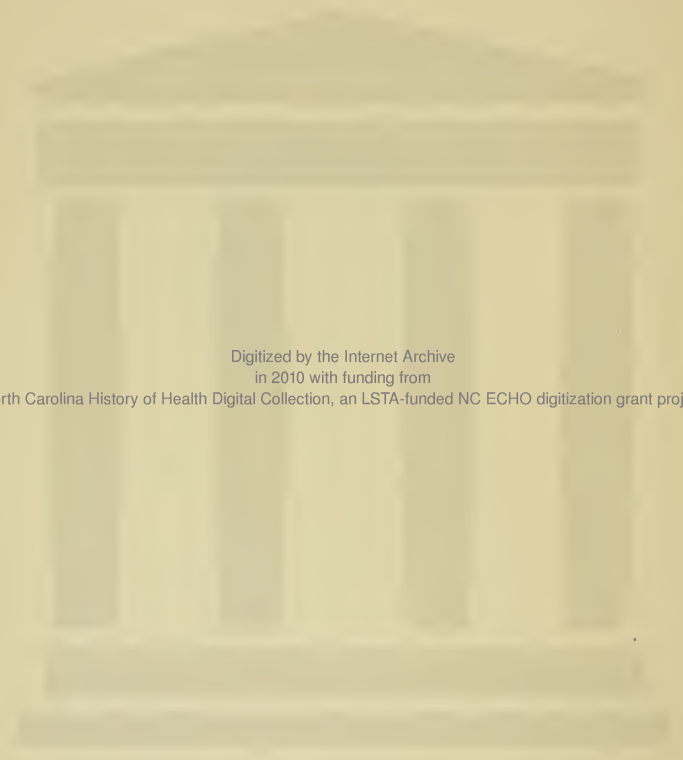

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VOL. XV. JANUARY, 1899. No. 1.

The Charlotte Medical Journal.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY.

EDITED BY E. C. REGISTER, M. D., AND J.C. MONTGOMERY, M. D.

CHARLOTTE, N. C.

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The Charlotte Medical Journal.

VOL. XV. CHARLOTTE, N. C., JANUARY, 1899. No. 1.

The Symptoms and Diagnosis of Simple Glaucoma.*

By Gaillard S. Tennent, M. D., Asheville, N. C.

There are some diseases which ought to be blotted out of existence, if for no other reasons than the trouble they give the profession in making an absolute diagnosis, and the danger arising from failure to make this diagnosis early in the disease. Glaucoma, which, according to Fuchs, furnishes one per cent. of all eye diseases, is one of these.

The fact that total blindness is the final result in every untreated case of chronic glaucoma, as well as in the majority of cases receiving the best of treatment, is a sufficient reason and excuse for offering a paper on the subject and occupying the valuable time of the society with its discussion.

It is true that there is something vague about the term, and that the highest authorities still differ as to the causes which produce the condition known as glaucoma. It is also true that there is a great deal of uncertainty connected with the diagnosis of many cases in their incipiency; still early diagnosis is possible and important.

The subject's interest to the general practitioner centres around these points: First, glaucoma in its different forms closely resembles other ills of every-day occurrence; Second, atropine, which is unfortunately looked upon as a panacea in eye troubles by some men, is decidedly contraindicated where there is even a suspicion of its presence or a tendency in that direction.

The symptoms of simple glaucoma during an exacerbation are very much like those of supra-orbital neuralgia, or, if the attack be more acute, may closely resemble those of a bilious attack, sick headache, or facial erysipelas. The appearance of the eye may also lead to the diagnosis of some less serious eye trouble, the treatment of which, when applied to a glaucomatous eye, would be disastrous.

If everyone were to realize that the disease is not such a very rare one and that it is as fatal to the sight as it is stated above, there would be far greater care exercised in the use of atropine, which often brings into activity latent cases, often brings on an acute attack in those predisposed to it and may, by a single instillation produce glaucoma in a perfectly normal eye after the age of 40. In a case recently seen by the author, atropine had been used continuously for several months before the outbreak which resulted in permanent blindness. Not having the evidence of observation during this time, it cannot be said that *post hoc, ergo propter hoc*, but it was decidedly a suspicious case, the patient being over 50 years of age; and it is a sample of many instances met with in treating eye troubles.

In order to lead up to the salient points in the diagnosis, it may be necessary to enter into technical details of little interest to the busy medical man, but it will be the author's aim to emphasize and dwell upon only those things with which everyone should be familiar.

Juler defines glaucoma as "the name given to the group of symptoms caused by an excess of intra-ocular tension." This state of abnormal tension may be caused and kept up by forces operating continuously or intermittently through an indefinite period of years, in which case it is termed simple glaucoma, or it may be produced by certain conditions existing for only a few hours and acting more rapidly, in which case it is called acute glaucoma. Between these two extremes there are various shades of the disease, progressing with more or less rapidity and acuity, and separated by no distinct lines. A strict definition of the term simple glaucoma is "non-inflammatory" glaucoma, which would exclude all these cases presenting acute symptoms, but the generally accepted classification includes all the chronic cases like those described below, under the same head. No attempt will be made to account for the origin of the different symptoms, for by so doing, one of the twelve digerent theories as to the causation of the disease may be slighted.

Simple glaucoma is practically a disease of the middle aged and of those advanced in years, though it is sometimes seen in the young. It presents, usually, four well marked stages: 1. The prodromal, which is marked by occasional attacks of pain, dimness of vision and halos, with increasing presbyopia in the interim; 2. The stage

*Read before the Buncombe County Medical Society, Nov. 21, 1898.

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of rapid advance in which the attacks are more frequent and only remit instead of intermitting; 3. Absolute glaucoma which is synonymous with blindness; 4. The stage of degeneration.

During the prodromal stage, which lasts from several months to many years, the patient complains of an increase in the asthenopic symptoms (a great majority of cases occur in the subjects of hyperopia or astigmatism) which cannot be relieved by glasses; he will be subject to attacks of dimness of vision attended with more or less neuralgic pain in the frontal region, and will state that during the attack, artificial lights are surrounded by halos of color and that objects appear as though seen through a fog. If the attack be a severe one, the conjunctiva becomes congested, the lids and surrounding tissues become swollen and œdematous, the pain and intolerance of light are acute, and there will be a feeling of tenderness or soreness through the frontal region for several days after its subsidence.

After some time the attacks become more frequent and the patient enters upon the second stage, in which the tension is constantly raised and a certain degree of pain and discomfort persists between seizures. The visual acuity may now be permanently lowered and the patient may be unable to use his eyes for near work, despite the frequent changes of glasses. The visual field becomes canstantly narrowed till, finally, the little vision which has been coming and going for some time past is permanently blotted out and the third stage or absolute glaucoma is reached.

From this time on there is no perception of light, except occasional subjective flashes which delude the unfortunate victim into the belief that sight is not permanently destroyed. The painful attacks continue until the undue pressure has had its effect; degeneration sets in, with reduction of tension and the eye becomes quiet.

The physical signs or objective symptoms, which are of more importance than the subjective from a diagnostic point of view, naturally fall into two classes: those discernible by ordinary means, and those requiring the use of special examinations for their detection.

Unless seen during an exacerbation, there is nothing distinctive in the external appearance of or feeling of the eye during the prodromal stage, and it is then that the ophthalmoscope and perimeter are most valuable. If, however, the patient be seen in one of his attacks, or if increased tension becomes permanent, it will readily be observed that the pupil is dilated, or very sluggish, the anterior chamber is shallow, and the eyeball distinctly harder than normal.

This hardness may be detected very readily, as Schweiger remarks, if one have "only enough faith;" more readily still at this time, because one eye is usually implicated long before its fellow, and its hardness contrasts with the feeling of the normal eye. Measuring the different degrees of tension is no harder than, and very similar to, testing the degrees of ripeness of large plums by their feeling. In practicing palpation, the patient should be told to close his eyes and look downward, pressure should then be made and increased alternately with the tips of the forefingers on the opposite sides of the ball.

If the onset be a severe one, resembling acute glaucoma, in addition to the signs noted above, there will be intense congestion of the conjunctiva, the cornea will be steamy or hazy looking and anæsthetic, and the lids and surrounding tissues will present a swollen, œdematous and rose aspect; so that the brow cannot be wrinkled.

Late in the disease, the pupils are widely and irregularly dilated, showing in the absolute stage the peculiar green reflex from which the malady has derived its name. The sclerotic, at this time, is of a bluish tint, and several enlarged, tortuous vessels may be seen near the corneal margin.

A direct ophthalmoscopic examination reveals two very important changes in the fundus: 1st. Cupping of the disc, or pushing back of the yielding nerve tissue at the point of least resistance; 2d. Pulsation, or permanent change in the calibre of the retinal vessels.

The cupping of the disc is progressive and goes hand in hand with the other symptoms, from a depression similar to that of early atrophy, to a condition in which the whole disc is deeply concave, with vessels disappearing over the edge of the cup like snakes crawling into a hole. The bottom of the cup is formed of the macula cribrosa, and at first is glistening white but finally assumes the gray color of atrophy. Cupping commences about the time of the first noticable subjective symptoms, and at first, may only occupy the temporal half of the nerve head, in which case it is hard to differentiate it from physiological cupping.

Arterial pulsation is sometimes spontaneous and can always be produced by slight pressure when abnormal tension exists; the diagnosis often depends upon the facility with which it can be brought about. Venous pulsation, though generally present, is a negative sign, it being often seen in

normal eyes. In addition to this, as the disease progresses, the calibre of the arteries becomes smaller and the veins become enlarged and tortuous.

Another important symptom is the gradual limitation of the visual field, which, though subjective, may be classed among the physical signs, owing to the process that has to be used in measuring it. The limitation commences in the upper nasal field, very early in the disease, and progresses gradually until there is only a narrow strip of relatively good vision extending outward from the centre. The disappearance of this strip in a specially severe attack, ushers in complete blindness. In contrast with the narrowing of optic atrophy the field for white usually contracts *pari passu* with that for colors.

Except in those cases which simulate optic atrophy, the diagnosis is easily made, if the following points be remembered: Early signs—rapid, or premature presbyopia, attacks of pain, dimness of vision and halos. In the more severe attacks—swelling and congestion with shallow anterior chamber, dilated pupils, steamy and insensible corneæ and recognizable hardness of the globe.

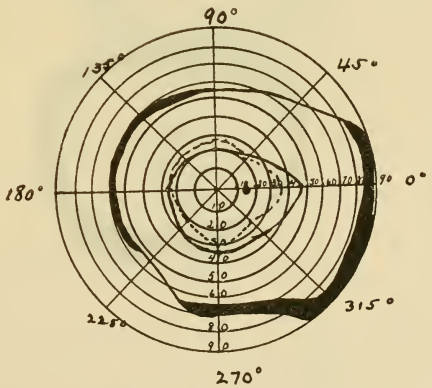
Seen during an attack, there is danger of confounding the symptoms with those of neuralgia, erysipelas or a bilious attack, and, in every case, attended with frontal or orbital pain, close attention should be paid to the condition of the pupils, cornea, and depth of the anterior chamber.

Locally, the appearances may lead to a diagnosis of conjunctivitis, keratitis or iritis. In conjunctivitis the pupils are normal and there is no deep-seated or severe pain. In keratitis the opacities are more dense and well marked. The iris is discolored and the pupils contracted in painful iritis. If, in any of these conditions, a mydriatic has been used before the patient is seen, the diagnosis becomes more difficult and a very careful examination has to be made,

In absolute glaucoma the greenish opacity of the pupils, arising from changes in the vitrous, may be mistaken for cataract, unless attention be paid to the dilated pupils and tortuous vessels near the sclero-corneal junction.

There are some cases ef glaucoma, especially among myopes, in which the tension is never appreciably increased, these and some other "quiet" cases are hard to differentiate from optic atrophy with cupping of the disc; it is here that the retinal pulsation and the peculiarities of the visual field assume special importance. It is sometimes necessary to examine the field in different degrees of light and under different circumstances to develop these peculiarities.

The four cases which follow are pictures of the conditions described above, and three of them are types of the first three stages, except in point of age. The other is not glaucoma at all, but a semi-pathological condition strongly resembling it, sometimes termed false glaucoma. Cases



II. and III., at the respective ages of 29 and 30 years, are remarkable as examples

of early development of the disease, while cases III. and IV. show its well known tendency to attack members of the same family.

Case I.—False Glaucoma. Miss ——, aet. 30. Seen October 4th, 1898. Has three myopic brothers. Has been suffering for several years from aortic insufficiency which has affected her health moderately.

Has been wearing glasses for near sight of moderate degree for about sixteen years. Symptoms of asthenopia have been persistent for past two or three years, in spite of scrupulous correction of the myopia and astigmatism; correction giving vision of $\frac{15}{15}$ plus, each eye. This asthenopia is accounted for by the fact that there is marked exophoria at the near point. Has never had any attacks of orbital pain, dimness of vision or halos.

Examination of the field shows that it is practically normal as far as white is concerned and slightly contracted for colors. This suggests optic nerve trouble.

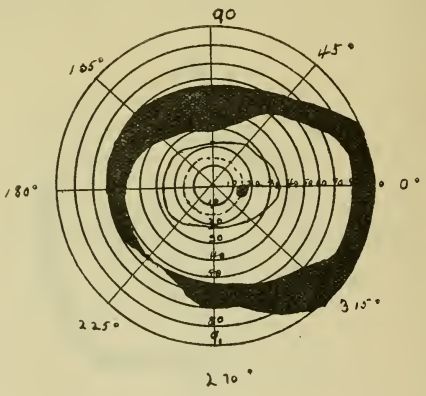
With the ophthalmoscope both optic nerve heads are found to be decidedly cupped on the temporal sides, one side of each cup being precipitous enough to completely hide the vessels as they dip down into the nerve. Arterial pulsation on the disc is only evoked by marked pressure or after bodily exertion. Tension normal. Pulsation and tension tested negatively several different days.

Diagnosis: Change in head of optic nerve from the undue arterial tension of aortic insufficiency, which accounts for the cupping and the limitation of the color field.

Case II.—Simple glaucoma. Mr. ——, aet. 33, unmarried. Family history negative. General health has always been good. Has been a moderate smoker since he was a boy, and drinks a little beer occasionally. Has always suffered from asthenopia, for which he has worn improperly adjusted glasses for several years. Vision is $\frac{15}{15}$ plus, each eye, with minus cylinders of low degree, axes horizontal.

Has had several acute, painful attacks, attended with congestion, photophobia and œdematous swelling of lids and brow over one eye. During these onsets the visual acuity was decidedly lowered and halos were noticed around artificial lights. The last one occurred about four years ago, but there have been times after fatigue or slight dissipation when the halos appeared again, and the vision became slightly foggy.

The field in each eye is found to be contracted moderately for white and decidedly for colors. The right field is more limited than the left, and especially in the upper nasal quadrant. Ophthalmoscopic examination reveals decided cupping of both discs,



very similar to that observed in case I. The vessels are normal in calibre, but arterial pulsation was elicited by very slight pressure. Tension is normal. Pulsation detected by repeated examinations at different intervals.

Diagnosis of simple glaucoma in the prodromal stage is made from the fact that four of the principal signs are, or have been, present, viz.: cupping of the disc, arterial pulsation on slight pressure, limitation of the field and painful attacks, with dimness of vision, congestion and halos.

Case III—Simple glaucoma, second stage. Mrs. ——, aet. 29. First seen on July 2d, 1898. Has an aunt blind from glaucoma, and a sister said to be affected in a manner similar to patient. General health has been fairly good. Vision with each eye is $\frac{5}{15}$ with minus .75D. Sph.

States that eyes have been weak for several years, and that for the last two years she has been subject to attacks about twice monthly, during which vision becomes foggy, neuralgic pain is felt in frontal region, and the eyes become congested. She also states that at these times artificial lights are surrounded by large rings of colors, and, in the worst seizures, upon looking at a lamp, the flame is invisible, a halo of brightness taking its place. During the intermissions, there is a constant feeling of uneasiness, generally amounting to pain, which precludes the use of the eyes for near work.

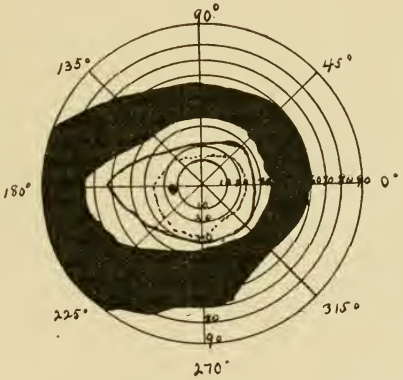
The discs are deeply cupped, and the nasal edges, from which the vessels spring, overhang the plainly visible macula cribrosa. At this time the arteries pulsated on slight pressure and the tension was perceptibly above normal.

Eserine was prescribed in one-fourth per cent. solution, to be instilled once daily for two months, as a test. Seen again four months later, the ophthalmoscopic picture was unchanged, pulse could not be elicited and the tension was normal. The general symptoms were better and no exacerbation had occurred during the whole period, although the eyes had been used freely and without much discomfort.

The field was then measured, showing a very extensive concentric limitation for the left eye, and a similar but smaller reduction for the right.

When first seen, the case had entered upon the second stage because of the frequent onsets, the serious symptoms in the intervals and the extensive narrowing of the field.

Case IV.—Absolute glaucoma. Mrs. ——, aet. 54. Married; mother of seven or eight children. Seen Aug. 27th, 1898. This patient is an aunt of the one designated, "Case III."



States that she has had weak eyes for thirty years. Is uncertain about first serious symptoms, but consulted an oculist fifteen years ago, who gave her large doses of strych. Eyes have grown rapidly worse during past four years, and typical glaucomatous attacks have succeded each other with increasing rapidity. For about eight months there was only a small patch of vision in each temporal field, which disappeared permanently four months ago.

Conditions present at time of examina-

tion: Vision abolished; both pupils fixed and dilated; large, tortuous vessels in anterior scleral region; media clear; discs gray and deeply cupped in their whole extent; enlarged veins and threadlike arteries crawl out of sight over the edge of the cup, to reappear on the bottom. The eyeballs are decidedly hard and unyielding and the painful attacks continue.

Hemorrhage in the New-Born.

By John N. Upshur, M. D., Richmond, Va., Professor of Practice, Medical College of Virginia.

The successful termination of labor, the mother and child both doing well, the strain of anxiety to the family relieved and the joy experienced that beside the hearthstone another heart throbs. When, in a few hours after the shadow of dire calamity to the infant, caused by hemorrhage from some source, again excites the gravest apprehensions of parents and friends—especially as in the presence of the malady the physician feels more or less impotent to bring the necessary relief because of the difficulty of detecting the cause. Nor do I find that much help is given us by authorities, and we fall back upon the ability to guess correctly, and administer remedies most empirically and usually with poor success.

I am led to the above preface by an experience in a case a year ago, which has set me to thinking on this subject. Before relating the case, however, I would consider the varieties and sources of hemorrhage in the newly born. Early in my professional life, I saw a case in which the blood oozed from the skin around the umbilicus, and could not be controlled by pressure styptics, or even the actual cautery, the infant dying in a few hours. The infant was about a week old when the bleeding came on; had seemed well, was well nourished, and of parentage free, so far as I could learn, from all taint. Hæmophilia is undoubtedly a cause, and probably was in the case above related; I could not learn of any heredity in this family. Comby (Twentieth Century Practice) says, "among thousands of children seen by me in Paris during the past sixteen years, I have observed but three cases of hæmophilia. This bleeding may come from trauma of some kind, or the mucous membrane of nose, mouth, or gastro-intestinal canal. Pathologically—changes, fatty, ulcerative, etc., are found in the capillaries, localized thinning of their walls, and thus the bleeding occurs."

Jacobi mentions the cases of two infants in which bleeding occurred spontaneously, merely from excessive thinness of the walls of the vessels. The blood would trickle from the surface of the lower extremities like drops of perspiration, from day to day, until the baby died from exhaustion. (Cyclopedia, Diseases of Children, Keatinig Vol. 2d). Hæmorrhage from the chord, or the capillaries of the chord is extremely fatal, the mortality being as high as 83 per cent. Dr. Thayer refers to 24,533 births, with only five cases of hæmorrhage. Vogel says extremely rare, once in 10,000 cases. The hæmorrhage may take place into the brain and be the initiative of some paralysis, but the following case illustrates a source of hæmorrhage, gastro-intestinal, which is usually intractable to treatment, and rapidly proves fatal.

Case. On the 19th of December, 1897, I delivered, after a satisfactory labor, an average female infant, of vigorous parentage and, so far as I could learn, free from all taint or heredity. The infant was well nourished, and took the breast satisfactorily. When thirty-six hours old it vomited some blood, not much. This was followed by a bloody stool and in the next twenty-four hours she had fifteen of this character till she was almost pulseless, mucous membranes and skin blanched and fontanelle deeply depressed, surface cool. Prognosis very grave and source of hæmorrhage very obscure. Remembering the disproportionate size of the liver in early life, I concluded that the cause of the bleeding was torpid liver with consequent congestion of the portal circulation and of the gastro-intestinal mucous membrane. Acting upon this theory I empirically gave grain ss. calomel every hour. So soon as a characteristic calomel stool was obtained the bleeding ceased. The infant rallied from the depression and made a satisfactory recovery. Now, at one year old she is plump, fairly grown, mucus membranes florid, though surface is pallid, teething backward. There was no evidence of jaundice in this case, at this time or subsequently. This view is sustained by the theory suggested by Grynfeltt as the result of the observations of Billard and confirmed by personal studies of the histology of the digestive mucus membrane of newborn infants (American Text Book).

I note that the therapy recommended is astringents, but this method of treatment is manifestly not rational. I know that calomel is said not to act directly on the liver, but it does indirectly, and it is a glandular stimulant; how much more rational then to administer an agent which by clinical ob-

servation we know will unload a congested portal circulation, and relieve the congested gastro-intestinal mucus membrane.

In conclusion, a word as to dietetic management. The infant should be regularly put to the breast, a moderate amount of stimulant, brandy or whisky, given, and it should be shielded from catching cold or even becoming slightly chilled.

210 W. Grace St.

A Case of Incontinence of Urine Cured by Anterior and Posterior Colporrhaphy.

By A. Lapthorn Smith, B. A., M. D., M. R. C. S., England. Fellow of the American Gynecological Society; Professor of Clinical Gynecology, Bishops University; Gynecologist to the Montreal Dispensary; Surgeon-in-chief of the Samartian Hospital for Women; Surgeon to Western Hospital.

During the last twenty-four years I have been consulted by about the same number of women for incontinence of urine following a very severe labor. A few of these were found on close examination to have a vesico-uterine or a vesico-vaginal fistula which was dealt with in the usual way and cured by operation. Nearly all the others were treated for two or three months with a mixture of iron, strychnine and phosphoric acid in full doses and were also cured, the cause in their cases being weakness of bruised and overstretched muscular fibres. But about six months ago the present case came under my care at the Montreal dispensary and proved an exception to the rule of my experience.

Mrs. M., age 40, had a very severe instrumental labor about a year ago, ever since which time she has had to wear large pads to catch her urine. Her physician was unable to stop it in any way. If she remained in bed she could hold her water for an hour or two and then it would trickle out if she moved or took a long breath and when she went about her work it kept running all the time, keeping her clothes wet, and always smelling of urine. I put her on the above tonic treatment, and in order to observe her better took her into the Samaritan Hospital for a couple of weeks. A careful examination failed to detect any fistula; in fact, in filling her bladder with warm salt solution, the latter flowed out beside the catheter; there seemed to be no life in the sphincter. There was a large rectocele and cystocele and lacerated perineum. Although I have seen a great many patients with this condition, and quite commonly causing desire to micturate frequently and also a sensation as though some urine still remained in the bladder, as indeed it does, yet I do not remember to have had a case in which it caused incontinence. I therefore feared that the cure of these conditions alone might not suffice to cure her of her trouble and I had some intention of at the same time shortening or taking a reef so to speak in the relaxed sphincter. This I found was quite easy to do when I had removed the vaginal mucous membrane to the extent of $2\frac{1}{2}$ inches in length and an inch and a half in breadth. In order to tighten up the sphincter I made the denudation further down towards the meatus than usual and indeed of drawing the edges surrounding the denuded area together with a purse string suture as I usually do, I tightened up the sphincter by means of a running catgut suture which was buried in the muscular layer of the bladder right down to the urethra. The vaginal mucous membrane was then accurately brought together over this. Hegar's operation on the posterior vaginal wall was then done, with a buried and a superficial row of catgut. This made a good support for the bladder.

Fortunately the catgut was good and her tissues were healthy so that in both, primary union was obtained. The result was all that could be desired. She could cough and turn in bed from the first day without wetting herself, and at the end of two weeks she could walk about with comfort and without a single drop of urine passing involuntary. Later reports state that she is completely cured of her infirmity.

250 Bishop St., Montreal,

Head Injuries.

By J. Herbert Austin, M. D., M. R. C. S., England, Assistant in Surgery, University Medical College, Kansas City, Missouri.

In considering this subject of injures to the head there are several facts that at once attract one's attention, and to a greater or less extent impress themselves on one's mind. First we notice where an injury may be situated. It may be purely external, a scalp wound only. The bony skull may be involved and also the brain, or we may have a serious brain lesion and yet the scalp and skull are practically sound and normal.

In some cases the scalp, skull and brain are all badly injured at the time of the accident. An injury such as this, where the scalp is torn, the skull fractured and the brain lacerated is necessarily a very seri-

ous one. In another class of cases the bony skull is the part that has suffered most, the skull may be fractured and badly so and yet the scalp has not been divided and the brain has not been torn. Now let us consider these various head injuries separately.

First, Scalp wounds. These vary greatly in severity. A slight cut in the scalp which is not deep need occasion no alarm. It will usually heal speedily. The wound must be thoroughly cleansed, the hair shaved away from the track of the wound, the edges brought neatly together so as to obtain union by first intention. A longer, deeper wound of the scalp involving Treve's "dangerous area" of the scalp is a more serious affair.

This "dangerous area" of the scalp is the layer of loose connective tissue just beneath the aponeurotic layer of the scalp, and just above the pericranium. When this area is opened there is every opportunity for the spread of a suppurative or erysipelatous process. So we must make every effort to render this wound surgically clean. Should puffing occur the wound must be opened so as to relieve any tension by giving free vent to any secretions or discharges that may exist. See that free drainage is kept up. Don't worry about sloughing or gangrene occuring in the scalp even in severe injuries. The scalp is more prone to live than to die, on account of its fine blood supply, even when extensively separated and almost cut off from the rest of the head. It is not enough to cut the hair as short as possible with scissors when treating a scalp wound, I always insist on being allowed to have the parts thoroughly shaved as well. The hair will soon grow again, and the part cannot be rendered as clean as it should be unless the shaving is done.

Now as regards fractures of the skull, we have great variety here also. A simple fracture of the skull, or crack in it, may exist and its presence not be suspected. Given that we know that a fracture of this nature exists, if there is no depression and no unfavorable symptoms follow, I believe such a case should be left alone. I consider it would be bad surgery to operate on such a case. Undoubtedly such cases make splendid recoveries without operation. Of course I well know how some surgeons would have us trephine in all cases, once the diagnosis "fracture of the skull" has been made. These gentlemen gain nothing in these cases, and the patient runs the risk of a serious operation.

In fractures of the skull with depression, trephine at once and relieve that pressure on the brain. Often brilliant results attend our efforts in these cases, patients speedily regaining consciousness and going on to a speedy recovery. An operation should be done in cases where unpleasant symptoms occur later, some time after the accident—may be to relieve adhesions, etc. In the case of a punctured fracture of the skull, an operation should be done at once to remove any foreign body from the brain, *c. g.* spicules of bone, and to cleanse the track of the wound.

Fracture of the base of the skull may be caused by a fall on the feet, the force of the blow passing upward to the occipital bone. In some cases a fall or blow upon the top of the head causes a fracture which extends to the base of the skull. Oftentimes we find blood and cerebro-spinal fluid escaping from the ear, nose, or mouth. The prognosis in cases of fracture of base of skull is very bad indeed, patients generally but not always dying. The reasons for such bad results are that the brain is often terribly injured at the time of the fracture and that often septic inflammation of the brain and membranes sets in. In the way of treatment the patient must be kept perfectly quiet to try and prevent inflammation. The ear should be syringed out with carbolic solution and dusted with iodoform, an antiseptic dressing being applied. Purgatives should be freely used, a fluid diet adhered to. Injuries of the brain vary greatly in severity also. Simple pressure on the brain can often be entirely relieved by trephining.

Laceration of the brain, as has already been stated, may occur with or without fracture, or other injury of the skull. Usually the brain is torn on the side of the head opposite to that on which the blow or injury is received. In a case where there is an open wound, and the torn brain is protruding, then the contused and lacerated brain substance should be removed, the wound thoroughly cleansed and the scalp replaced.

In a case where laceration of the brain exists and yet there is no external injury the symptoms of paralysis will guide us as to the site of the lesion and inform us whether the hemorrhage is spreading or not. Such a case should be kept perfectly quiet, a very light diet used, and the bowels should be kept quite active.

When we believe from the symptoms that the laceration is cortical and superficial, and quite localized, then trephining over this area is justifiable, to remove hardened clots and the torn brain tissue. Every antiseptic precaution must be observed. In some of these cases the operation relieves completely the symptoms of cerebral irritation and the patient makes an uninter-

rupted recovery. In others no improvement follows.

Anæsthesia and Anæsthetics.*

By C. C. Hersman, M. D., Physician to South Side Hospital of Pittsburgh, Lecturer on Materia Medical and Therapeutics South Side Hospital Training School for Nurses, Past Surgeon P. R. R., Member South Side, Allegheny County and Pennylvania State Midical Societies, W. Va. State Medical Society (honorary), American Medical Association, American Medical Temperance Association, &c., &c.

Much of the surgeon's success depends upon the anæsthetist. In administering an anesthetic there is no such thing as minor surgery. A strong person with a full stomach runs greater risk from a "whiff" of chloroform while under the anesthetic than a weaker person properly prepared, who is kept under it for an hour; and if the surgeon is inclined to look lightly on it, the anesthetist should be all the more careful. Under no circumstances should the clothes fit tightly, and this applies to all anesthetics. The patient's meals should be interfered with as little as possible, but allow an interval of four or five hours between the last meal and the anesthetic. To give soup and light diets at hours other than the meal time is a mistake. Loose teeth should be noted, false teeth and tobacco removed, and take note whether the patient breathes freely through the nose. A faulty position of the head is the most frequent error, and this applies *particularly* to dentists and operations on the mouth. Flexion on the sternum or extension on the spine should be avoided during inhalation. Extension upon the spine brings the base of the tongue and epiglottis away from the opening of the larynx, making swallowing either difficult or impossible and allowing saliva or other foreign substance to enter it.

Always keep the head in the long axis of the body.

Idiosyncrasies are often nothing short of the fault or carelessness of the anesthetist.

Opinion is still divided as to the most suitable anesthetic in general surgery. Of course, statistics show that ether is safest. But it cannot be denied that ether-bronchitis and ether-pneumonia may occur, and until some authentic inquiry is made into this frequency we do not know the precise comparative risks of ether and chloroform. Of course, chloroform is safer in hot than in cold climates, and administration of ether in high temperatures is difficult or impossible. Taken all in all ether is safer, but in well appointed hospitals, with an expert anesthetizer, I see few contraindications to chloroform. It is well enough to have other anesthetics at hand, as well as tongue forceps, gag, restoratives, etc., but the more one sees of anesthesia the less need he sees for anything save proper position and early and efficient artificial respiration.

If pallor and feeble pulse occur from chloroform, ether is a good restorative, but often, I believe, valuable time has been lost by resorting to these when the anesthetist should have turned his attention to the respiration. Muscular men while passing through the stage of muscular spasm just prior to deep anesthesia may have their breathing arrested by the muscles of the jaw and neck becoming fixed. In this class of men I believe ether to be the safer.

Close attention should be paid to the breathing. See that every breath enters and leaves the lungs.

Too often the anesthetist has realized nothing wrong until cyanosis, lividity, pallor, or pulselessness has drawn his attention to the condition

There is not one student in five who graduates that can put his theoretical knowledge to practical test when giving his first anesthetic. They should have clinical instruction as well

Keep the lower jaw well forward. In laryngeal spasm rub the lips briskly with a dry towel. It is the custom to rush to the hypodermic syringe in case of weak pulse, when often the correction of bad breathing would right everything. It is too much the habit to attend altogether to the circulation. There is no better stimulation to the circulation than free breathing.

In collapse from surgical causes resort to your strychnia, etc., but collapse from overnarcosis is to be treated from the respiratory side.

The following are some of the solutions used by surgeons:

200 parts chloroform, 60 parts ether, and 60 parts alcohol.
3 parts chloroform, 2 parts ether, and 1 part alcohol.
1 part chloroform and 3 parts of ether.
2 parts chloroform and 1 part alcohol.
3 parts of chloroform and 1 part alcohol.
5 parts chloroform and 1 of oleum terabintheni.
Chloroform 1 lb. to amyl nitrite 1 drachm.
A. C. E. mixture.
Chloroform and oxygen safest.

This last mixture, it is said, anesthetises sooner than other mixtures with a smaller amount of chloroform; the cheeks and lips

*Read at a meeting of the Allegheny County Medical Society, at Pittsburgh, Pa., Nov. 15,'98.

are rosy; blood from the wound bright red; shock and nausea less, and consciousness more quickly gained.

This preparation is obtained by Oxygen passed under pressure through chloroform.

Menthol 1 part, chloroform 10 parts, and ether 15 parts used as a spray will *cause local anesthesia.*

The danger from chloroform is immediate; ether, remote—at a later stage, days or even weeks after, especially if the kidneys are affected, or if emphysemia, asthma, chronic bronchitis, old pleurisy, cardiac hypertrophy, fatty heart or valvular disease is present. Also, it may cause suppression of urine, vesicle irritation, uremic symptoms, or bronchitis.

Chloroform would then be indicated in chronic endarteritis occurring in those in advanced years; chronic inflammations of the respiratory tract and advanced pulmonary affections; organic diseases of the nervous system; operations about the head; renal diseases; when ether has produced deleterious effects at a former time; chronic alcoholism; in the aged or very young (children) or any one with weakened or undeveloped muscular system; puerperal eclampsia; night operating; during second stage of labor. In the latter, it is said by some, that it prevents shock, reduces liability to rupture of cervix and perineum; that it does not produce or cause uterine inertia and postpartum hemorrhage; that it does not affect the fœtus.

In military surgery on the field chloroform is indicated.

The administration should be begun slowly, given in small quantity, admitting plenty of air until the suffocating stage is over.

Chloroform has been comdemned possibly more on theoretical grounds than from practical observation, and I believe the greater mortality is more the cause of carelessness than otherwise, as a very great number of these cases have been under the care of students, dentists, or recent graduates.

The death-rate in Berlin in about 52,000 cases in 1893 from anesthetics is one in 2,587; from chloroform alone one in 1,924. Their mode of administration—flat down on the face—is thought to have much to do with it. Also, most fatalities occur with men of little experience, one or two years after graduation (Silk, Lancet, April 28th, 1894).

It is the experienced man who knows best how to act in all emergencies. The anesthetist should be oblivious to all but his part. Never push in the first stage. If coughing or rapid swallowing occur give air. Have patient breathe through the mouth until after spasmodic stage, as breathing through the nose may cause spasm of the glottis. This applies to ether as well. Never touch the eyeball with the finger, as it is never clean, and has caused severe conjunctivitis and suppurating keratitis. Simply press the lid down over the ball gently. If the patient makes no attempt to close the eye insensibility is complete. The conjunctiva is not the last part to become insensitive. The anterior portion of the chest is the last part of the body to lose sensation.

A wide pupil which does not respond to light signifies deep anesthesia. If responsive to light that stage has not been reached or the patient is returning to sensibility. A contracted pupil is a sign of danger, however, some of my own observations in children show a very narrow pupil just as they are returning to consciousness. The pupil in children is an unsafe guide, however, as the pupilary reflex is not fully developed.

Chloroform is an ideal anesthetic if properly handled, and if medical students would pay more attention to anesthesia, chloroform would be more often employed. Practically I see few contraindications It is the typical anesthetic for children, the aged, and in obstetrics. Give but a few drops (2 or 3) at first, and gradually increase as anesthesia comes on. A few short inhalations followed by a deep one is dangerous if used in greater quantity. The danger is an overdose. It is not so much the quantity taken that makes the overdose as the quantity taken at one inhalation many times.

Chloroform is contraindicated in surgical shock, epilepsy, spinabifida, when there is tendency to syncope, fatty heart and chronic valvular disease, acute alcoholism, delirium tremens, fatty liver, and when under the influence of chloral.

Never give chloroform except in recumbent position, not even on the side. Never give it during digestion, and never except in company with a third person. This applies to *all* anesthetics.

The anesthetist should pay no attention to the operation. The patient has a chance from the surgeon's knife, but none from the anesthetic. Any feeling of apprehension on the part of the patient should be overcome by a few encouraging words. It may save his life.

An intense fear, with the combined influence of the anesthetic, may cause collapse and death from heart failure or even heart paralysis. Haste, too, has had its fatalities. Just preceding narcosis there is an acceleration of the pulse, but during complete narcosis there is a gradual diminution

of beats. The pupil has a regular cycle, first dilated and active, then contracted, lastly dilated and fixed. The first is the sign of incomplete narcosis, the second complete and safe narcosis (the eyes stare straight ahead. I have observed marked divergent squint in the aged); third, danger of imminent paralysis of respiratory center.

However, the pupil may be widely dilated if operating in the abdominal cavity or rectum from sympathetic irritation and the anesthetic may have to be pushed somewhat to counteract it.

If the patient should struggle take hold of the wrists and allow free use of the arms and make pressure on the shoulders to prevent rising. If he attempts to tear the apparatus away keep the hand in such position that he may take hold of it instead. Always replacing it as soon as he lets go, so that he may again remove the hand instead of the inhaler. If vomiting occur early, have patient take deep breath and hold it. The pupils dilate when vomiting. Very rapid breathing is a sign of danger. If the heart stops place the thumb between the apex beat and the sternum, and make quick, strong movements at the rate of from 30 to 120 times per minute. This forces heart contraction. Force the lower jaw forward and make rhythmic traction on the tongue. If the pulse is small and hard, admit air. If weak and fast, or intermittent, stop the chloroform and favor the circulation through the cappillaries by rubbing.

Dilate the sphincter ani and use all other methods needed. In the most dangerous asphyxias the heart stands still and the pupils dilate without reaction, though respiration may continue. This is cardiac syncope and usually happens in the beginning. Fear or nasal reflex, already mentioned, may be the cause.

This dilatation may occur almost at once in drunkards or very nervous persons from too large doses.

If the countenance changes from anxious to depressed, admit air. The color of the ear is said to be a good index.

Methods of resuscitation should never be stopped too soon.

Allow the patient to sleep off the narcotic; he is less liable to vomit. A cloth moistened with vinegar, placed in front of the nose, will many times prevent vomiting.

Nitrous oxide gas is possibly the safest of all anesthetics, and should be used in *short operations*. Combined with oxygen makes a safe anesthetic. In reducing dislocations, fractures, re-opening the site of operation, making uterine examinations, redressing wounds, and all short punishments if severe, should be mitigated by this gas. To give any other in a dentist's chair seems to me little short of malpractice. However, as stated before, it should be combined with oxygen, to be used when there is the least sign of lividity or cyanosis. So administered I believe the dangers would be almost *nil*. The position in a dentist's chair contraindicates any other anesthetic.

Ether or ethyl oxide is safer than chloroform (methenyl chloride-terchloride of formyl), but the bad odor is a serious objection, and it is more likely to cause vomiting. When first inhaled there is a sense of asphyxia and a severe burning of the air passages. It, however, concerns the surgeons more than the others do from its frequent use. Erotic impressions may present themselves so vividly as to leave the impression until after anesthesia is concluded. At first respirations are increased, but as anesthesia increases they become slower and more shallow.

Operate as soon as the patient is completely anesthetized. If carried further there may be paralysis of respiration.

Ether should be given by the so-called closed method, but do not rush it at first nor close off all air, do so gradually.

According to some ether is indicated with few exceptions.

Marcus, of Philadelphia, who has anesthetized several thousand patients, says ether is never contraindicated if properly administered. Coming from him it deserves more than passing notice. However, the following text would indicate a difference of opinion:

The investigations of H. A. Hare, in the Hyderabad Commission, India, concludes that chloroform kills by vasomotor paralysis; ether by paralysis of respiration, and nitrous oxide by asphyxiation.

No drug has yet been used to produce anesthesia, says Frank C. Hammond, of Philadelphia, that has not caused death.

No doubt the least danger would be in an anesthetic with a boiling point below 100 degrees Fahr., or at or near the normal temperature of the body. Many experiments based upon this thought have been tried; the latest by Schleich. He has prepared three formulæ; the one for general use as follows: Chloroform 30 c.c., petroleum ether 15 c.c., sulphuric ether 80 c.c. There is claimed for this by Dr. Meyer, of New York:

1. During the induction of anesthesia, no salivation, rarely any accumulation of mucus in the trachea, and no cyanosis.

2. During the stage of anesthesia, rarely

any accumulation of mucous in the trachea and no cyanosis.

3. The patient awakens more rapidly with less nausea. One drawback, the chlorine odor.

Under the head of mixed anesthesia some years ago (10 or 12) much was said about a hypodermic injection of morphia preceding the anesthetic. I mention it only to condemn it. After a thorough trial of the mixed anesthetic, it was found to be unsafe as a routine, and was as vigorously condemned as at first advocated.

In the first place, to follow such a method is routine, and routinity is unscientific. In the second place, it is unsafe in many cases and very unsafe in some.

The patient, of course, goes under the anesthetic much more readily, but with a complicated danger. In morphia poisoning death is more likely to occur from paralysis of respiration, due to the direct action of the poison on the respiratory center in the medulla. This is proven by the fact that the breathing of dogs and rabbits, whose pneumogastrics have been cut, are as much affected by morphia as those whose nerves are entire, says Wood.

It diminishes the sensibility of the respiratory center; hence the involuntary breathing is less perfectly performed which adds greatly to the dangers of an anesthetic.

In opium poisoning the patient in some cases will suspend all effort to breathe if artificial respiration is performed. Very alarming effects have been produced by the injection of one-sixth grain of morphia, and the injection of one-half grain has caused death. Hence it is readily seen that in any case of idiosyncrasy such procedure should not be tolerated. Again in many others it would be dangerous owing to some idiosyncrasy to the anesthetic.

Some other uses of chloroform are: Ten to twenty drops, three or more times a day, in albuminuria of pregnancy; applied on lint it stays the flow of blood without leaving a clot. Ten drops every half hour relieves lead colic. Applied on a folded cloth to the skin acts in a few minutes as a mustard plaster. Pressed on the seventh cervical vertebra will often check a dry cough. Half a drachm of a mixture of two parts chloroform and one part alcohol inhaled will produce sleep.

Complete narcosis will cause spontaneous reduction of hernia in somo cases.

BIBLIOGRAPHY.

Frank C. Hammond, M.D., Philadelphia.
Frederick W. Hewitt, M. A., M. D., Cantab, M.R.C.S., Eng., London, Eng.
Herman D. Marcus, M. D., Philadelphia.
David R. Fly, M. D., Fortworth, Tex.

Abortion of Fevers.

By T. Edwards Converse, M. D., Adjunct Professor of Ophthalmology and Otology, Hospital College of Medicine, Louisville, Ky.

In taking up the subject of abortion of fevers, I have undertaken the discussion of some of the oldest, threadbare theories in the science of medicine, for if the oldest books on the treatment of fever are consulted, and a careful reading is made, there will be found a great deal of literature on this subject, which matter has been carefully argued from different standpoints, but very few who have written on the subject have attacked the matter from the right direction, having argued more from the symptoms manifested than the cause of the fever, having gone at it from an external aspect instead of attacking it at the root.

In the attack on fevers the treatment must be similar to the way a fireman attacks the fire, for he sees the smoke and flame and notices the effect of the heat to a great extent, but in his attack his first step is to get at the seat of trouble, and to do this he gets rid of the smoke by cutting holes in the roof to allow the smoke to escape, and at the same time he attacks the flame as actively as possible, working towards the site of the conflagration, but at first he may be unable to locate it on account of the smoke and other obstacles, but whenever the exact locality is located the attack with the water is made vigorously and the fire is extinguished. In the treatment of fevers the first thing to do is to attack the fever, reduce it if dangerously high, and at the same time locate the cause and treat that promptly. In the abortion of fevers like attacks are made, and in a similar manner as the fireman's tactics to prevent the spread of the conflagration. In all fevers, it makes very little difference what kind, the cause must be first located, and then the treatment instituted and carried out which will reduce it and also cure it. In typhoid fever there have been a great many abortive treatment theories promulgated, and the amount of scientific experimentation in that line of original investigation has been very great, and to a certain extent the results have been fairly good, but when the Peyer's patches have once become thoroughly infected, and an acute inflammation is in progress and ulceration of the patches well established, there is no aborting the fever and all the results which might possibly follow. True, treatment can be used which will ameliorate all the symptoms and modify the severity of the disease. To succeed in the abortion of this fever it is necessary to make a direct

and early vigorous attack when the fever is in its infancy and before the trouble has reached an active stage, for the longer the proper treatment is delayed the harder it is to get good results. Various methods for aborting this have been used, as the use of minute doses of calomel and podophyllin, etc., and apparently in a great many of the cases there has been a certain degree of success. In malarious fevers there also have been various treatments used to abort the trouble, and large doses of the sulphate of quinine, which is regarded as a specific in this trouble, supplemented with calomel, arsenic and iron, seem to have been the favorite medication. but often these have been found wanting. In the treatment of these two classes of fevers, lately my attention has been called to the properties of Viskolein, manufactured after the formula of Dr. Geo. H. Rice, and this preparation used in proper doses and correctly administered has on several occasions proven very satisfactory. This drug seems to act by reducing the temperature and indirectly but proportionally reducing the pulse, and from the results manifested, seems to circulate in the blood, acting as a powerful and reliable antiseptic, destroying all micro-organism in it. The bad effects of it are almost nil, for in my hands as yet I have not had any bad effects or dangerous symptoms, and the action seems to be very quick. I will report a few cases where I have used it, the mode of administration and the results.

Case 1.—A. N., female, white, single, age 20, robust in appearance and giving a good family history, but living in a malarious district of this city; first came to my office with a history of general malaise, pain in the small of the back, headache, bowels constipated, and fever. The thermometer showed a temperature of 101 degrees, pulse 90 and full. She complained of no appetite and vomited almost every time she took food. The tongue was covered with a thick, rough, ugly coat, and the breath very offensive. No tenderness over the abdomen, but the spleen was slightly enlarged, and on firm deep pressure was tender. My diagnosis was malaria, and as she gave a history of this trouble for several days before coming to me I was of the opinion that she was suffering from what is called slow malarial fever in this part of the country. The microscope showed the plasmodia in the blood very plainly, and I knew I was liable to have a patient which would be sick several days before convalescence could be established. I prescribed calomel in one-fourth grain doses combined with podophyllin, one-sixteenth of a grain, every hour until eight doses were taken, and then the sulphate of quinine, two grains in solution, every two hours. The next morning I called at the house and found that the bowels had moved, but the fever was higher by one degree and the pulse one hundred, no appetite and steady pain in the long bones. I increased the dose of quinine for three days, using in conjunction with it Rochelle's salts as a laxative without improvement. I then determined to use Viskolein, but only used it in the powder, and not hypodermically as is recommended, and from the start gave five grains every four hours for the first day, all other treatment being discontinued except the laxative, but with very little improvement, when I increased the dose to ten grains every five hours, and in twenty-four hours the temperature had fallen from the neighborhood of 102 degrees to 99, and the pulse had dropped in proportion. This dosage was continued for another forty-eight hours, when the temperature was normal and the pulse 78, and she was put on a tonic and was able in a few days to return to her work. This patient was seen the first time after having the fever some four or five days, and the sulphate of quinine did not have any effect for about five days, but when that drug was discontinued, and the Viskolein was used, in forty-eight hours the temperature was almost normal, and in seventy-two hours convalescence was well established.

Case 2.—J. W., laborer, white, single, aged 34, sent for me, and arriving at the house found him with a fever of 103¾ degrees, pulse 110, tongue heavily furred, bowels loose, four and five actions a day, pain in the back of the head and a very severe pain in the small of the back, abdomen slightly tender and a little tympanitic, urine high colored and scanty. He gave a history of having been sick four days, and on each succeeding day the fever appeared to get higher and other symptoms increased in severity. He had been taking quinine in large doses, but had not derived any benefit from it. My suspicions were aroused in the directions of typhoid fever, but I was not sure of it, but as a precautionary measure I put him on small doses of calomel, and good size doses of the sulphate of quinine in solution, but without any reduction of the symptoms, as the temperature would be 103 at four in the afternoon and 101 in the morning; insomnia very marked and some delirium, and the tympanitis increasing. I then put the patient on five grains of the Viskolein every four hours, but preceded this treatment by giving hypodermically ten minims of the liquid Viskolein in ten minims of distilled water, and no other

treatment. The next morning the nurse's report showed that the temperature had not gone as high as in the afternoon previous, but the morning temperature was the same. I continued the treatment by giving ten grains of the Viskolein every five hours, night and day, and this was followed by a diminution of the tympanites, and a checking of the bowels and a steady decline in temperature. and four days after the Viskolein was started there was no fever, and the patient went on to convalescence, being put on the hypophosphites.

The first diagnosis was typhoid fever, and from all indications the diagnosis was correct. There were no rose spots, and tenderness was not sufficient to be really diagnostic, but if it was a case of typhoid fever, it was either that the temperature was normal in two weeks after first symptoms of the fever, or else the treatment had a great tendency to reduce or modify all the symptoms.

Case 3.—This case is not one of aborted fever, but one where the fever and all the symptoms were very much modified in reference to severity and action, and made what appeared at first to be a very severe and dangerous condition, a very encouraging and easy one to treat, Mrs. M. M., white, married, aged 30, large and very fleshy, was taken on the first of the week and I was sent for on Wednesday, and I found the patient in a stupor, temperature 104¾ deg's., pulse 120, weak and small, the skin dry and hard, tongue heavily coated and cracked, the bowels very loose, the discharges being yellow and very offensive, a slight rash on the neck and face, but none on the body. The abdomen was tympanitic and very tender, unusually so for this stage of typhoid fever. The patient had suffered from insomnia from the beginning of the attack. I prescribed salol in small doses and had her given a sponge bath to reduce the temperature, which it did two degrees, when she fell asleep and slept several hours. Sulphate of quinine with the salol was given for three days to see what effect it had on the range of the fever, and found that it did not affect it at all when the diagnosis from the regular range of the fever was made as typhoid fever. I then began viskolein in ten grain doses four times in twenty-four hours, salol being used at the same time, and the diet being regulated to suit this trouble. After the administration of the viskolein the abdomen became less tender and the passages were more normal and only about two a day, the tympanites being less marked. The fever dropped very much and remained in the neighborhood of 101 or 102 degrees, at the highest, for a week, when it gradually and regularly dropped to normal at least once a day, and the fever on the twentieth day did not get above 99 deg's., and I discharged her and she regained her strength very fast. She was pregnant (in her sixth month) when taken sick, and since then has been delivered, with a fine baby, but some other doctor was the attending physician at the event. The noticeable feature about this case was the profound condition on the fourth day of the fever, the alarming symptoms and gravity of them from the first; and from what I could judge the treatment did not abort the fever but it did ameliorate all of the symptoms. There were no emorrhages, either from the bowels or nose.

Case 4.—This case is a little different from the usual run of fever, as the viskolein was used in a case of tonsilitis. The patient was a young man robust and strong and by occupation a bookkeeper. He gave a history of having suffered for the last ten years with a chronic suppurative tonsilitis, and had, at different times, had both tonsils clipped, the left being removed entirely, but the right had been only partially, and the remaining portion gave him a great deal of trouble, for whenever he went out in the cold, as skating or hunting, or even got wet on a rainy day, he was sure to have trouble which lasted generally for a week When he came to my office his right tonsil was red and œdematous and the pain was very severe, which radiated toward the ear, but there were no indications of a suppurative process going on, and, as much on account of the fever as anything else, I gave him a five-minim injection of the liquid viskolein with five minims of distilled water, and ordered five grains of the powder every four hours. In three days he reported back with the history that his throat was well and that there had not been any suppuration and that all the symptoms became very much less severe after taking the powders one day, and it was the first time out of some half dozen attacks that the tonsils had not gone on to suppuration, for generally he would be suffering with a great deal of fever for a week, but in this case the trouble was well by the third day. I can not attribute it to anything but the action of the drug. The cases cited are only a few of several that I have treated by this drug.

From the cases cited the conclusion is drawn that the viskolein seems to reduce the fever without producing shock or depression and that the pulse seems to be very little affected. In miasmatic troubles the drug seems to circulate in the blood and attacks directly the micro-organisms and destroys

them there, and at the same time does not seem to have any injurious effect upon the blood. It seems to keep the bowels in an antiseptic condition as thoroughly as any drug we have, and also relieves diarrhœa. It seems to have very little effect on the kidneys as far as I was able to observe. In the use of it as an abortive treatment in fevers I believe that it has a wide scope of usefulness and the future will show that even if it does not directly abort fevers in every case, it certainly has a very beneficial effect upon them in reducing the temperature, regulating the bowels, and restoring the equilibrium between the temperature and the pulse.

4th and Chestnut.

Pernicious Malarial Fever Complicating the Puerperal State—with Report of a Case.

By F. D. Gray, M.D., Jersey City, N.J., Attending Surgeon to Christ Hospital, Jersey City; Member "Practitioners Club," Jersey City; Member Hudson County Medical Society.

There is a strong tendency on the part of many, perhaps the majority of the medical profession, to regard every febrile complication of the puerperium, as of septic origin, and without sufficient investigation of all the features of the case, to adapt the treatment to that diagnosis.

At the outset we must admit that if a routine diagnosis for these cases is to be adopted, that of sepsis will fit a larger number than any other, and consequently a fixed antiseptic method of treatment will be more appropriate and will relieve more patients than any other; but wherefore is the necessity of any stereotyped diagnosis or plan of treatment in any particular class of cases? It would be as consistent to classify all ailments in our changeable northern climates as Pneumonia; all diseases in the infected regions of India as cholera; and all those which come under the care of physicians in the malarial regions in the south, as intermittent or remittent fever, as to pronounce every fever occurring during the puerperium as one depending upon sepsis.

As a matter of course, if we are obliged to adhere to one diagnosis, it is much safer, as a rule, to treat all fevers of the puerperal state as septic, than to loosely class a certain percentage of them as malarial; but with the modern facilities for accurate diagnosis, either extreme of error is uncalled for and reprehensible. Necessarily a certain period must elapse between the onset of symptoms and our ability to reach a positive diagnosis. During that interval as a matter of course, when the question lies between sepsis and a malarial infection, the strictly safe plan would be to give our patient the benefit of treatment from both standpoints, in-as-much as this can result in no harm and whichever may prove to be the true cause of her trouble, we have *gained* instead of *lost* a valuable headway upon the disease. Referring now to the methods by which we can discriminate between these two types of infection, I would say briefly, even at the risk of rehearsing what my readers may already know, that a culture, properly made, from both vaginal and uterine secretions, at the *earliest possible moment*, should within twenty-four to forty-eight hours, at most, establish or disprove the presence of septic infection of the genital tract; during this period it is equally practicable, by microscopical examination of the blood, to prove the presence or absence of malarial infection as indicated by the plasmodia which so constantly attend malarial disease.

Permit me again to impress upon the minds of my readers the importance of vigorously carrying out the accepted modes of combating the presence either of septic germs, on the one hand, or of plasmodia on the other: in this connection let me urge caution in the use of cutting instruments, such as the sharp curette, in favor of the more conservative and less harmful dull instruments, combined with thorough irrigation and the application of such antiseptic preparations as Churchill's Caustic Tincture of Iodine, 1-5000 solution of mercury bichloride or 1-100 solution of carbolic acid, applied to the uterine canal and to any abrasions or lacerations upon the vaginal surface, or the vaginal portion of the cerved uteri and, in suitable cases the hypodermatic use of Marmorek serum. By combining this plan of treatment with full doses of quinine in solution or hypodermatically, or with the use of Warburg's Tincture or such other anti-malarial remedies, as the medical attendant may see fit to use, we are giving our patient the benefit of any doubt which may exist, while at the same time we in no way prejudice her chances of recovery, whatever may prove to be the true nature of her affection.

To illustrate the significance of the foregoing remarks, allow me to submit the history of a case occurring in my practice a little more than a year ago:

Mrs. T. F., white, married, primipara, aet. twenty-two, was attended by myself and my associate, Dr. T. H. Atkinson, in her confinement, which occurred Nov. 5th,

1897, both of us made use of all the usual antiseptic precautions in which we were firm believers. Her accouchment was completed without special difficulties other than those attending an ordinary forceps delivery; there were practically no lacerations of the cervix or perineum and the entire period of delivery did not cover more than six hours. The course of her convalescense was uneventful until the sixth day, beyond the fact of slight mammary tenderness due to excoriated nipples. Pulse, temperature and respirations were normal; abdominal tenderness absent; lochia normal as to quantity and free from odor. Upon the sixth day, however, I was summoned to the patient in consequence of a chill occurring at 2 P. M. I found the temperature per oram to be 102 deg., pulse 96, respirations normal, *no abdominal tenderness, no change in the lochia*, mammary tenderness still existing. I was at loss to decide whether her chill and elevation of temperature were due to saparemic infection of the genital tract, a malarial infection of the individual, or a beginning suppurative action in the mammary gland. In consequence of this uncertainty I gave the patient a very thorough and prolonged vaginal douche of carbolic acid solution of the strength of 1-100; I also ordered quinine sulphate in acid solution, the dosage being five grains every three hours, also the evaporating lotion which had already been applied to the breast was continued. This being the first case presenting so serious a combination of symptoms in the puerperium occurring in my practice during a period covering my last four or five hundred cases, and in view of the fact that I had within the previous week read a paper before the "Practitioners' Club" of our city on the subject of "The Modern Aspects of Puerperal Fever," and published in the New York Medical Record, Nov. 26th, 1898, in which I had taken very strong grounds as to the direct responsibility of the accoucheur in whose practice this disease might appear—my feelings in the presence of this case can well be imagined and I feared that I was about to be confronted by the "irony of fate" and compelled either to confess myself guilty of the very errors I had so strongly condemned, or else recant from the position I had assumed; however, as the sequel proved I, happily, was not forced to either alternative.

To resume the history of the case: The patient was again seen by me at 10.30 that evening and I found, in spite of the treatment established, her temperature had advanced one degree, with a corresponding increase of pulse, and a coincident increase of her general discomfort. Feeling now that in case there were a vaginal or uterine infection my preliminary antiseptic treatment may have been insufficient, I placed the patient on the table and with the assistance of my associate, I first secured a specimen of both vaginal and uterine discharges which were applied to gelatine in a culture tube and immediately sent to a competent pathologist for his opinion, after a suitable period of incubation. A careful inspection of the vagina showed but a few abrasions which were cauterized with Churchill's Tincture. Following this the uterine cavity was gently but thoroughly cleansed by the use of the dull curette, free intra-uterine irrigation and subsequent application of Churchill's Caustic Tincture of Iodine. I would state here that the use of the curette and intra-uterine irrigation revealed the presence of no retained clots or secundines. The quinine solution was ordered continued in the same dosage. Feeling now that I had placed my patient on a thorough preliminary course of treatment I anxiously awaited its results on the morrow. Upon making my morning call at 9 o'clock, I learned that she had had a slight chill at about 4 A. M. but found the temperature to register only 101 degrees, showing a material defervescence over her condition of the previous afternoon and evening; her general condition was also somewhat improved and I noticed that she displayed a moderate degree of perspiration. I may state here that the urine had been examined subsequent to the preliminary chill and was found to be negative. The fact that the mammary tenderness was lessened, led me to feel that *that* could probably be eliminated as the source of the trouble; no further antiseptic measures were used, and the anti-malarial treatment continued as before. On the afternoon of that day, at about 2 o'clock, another chill occurred and circumstances preventing my reaching her until the evening, I found her temperature entirely normal, but with a history of fever following the chill, succeeded by free perspiration. This recurrence of a chill at practically the same hour as on the previous day, followed by fever and perspiration and in a few hours by complete defervescence, began to clear up my diagnosis and I felt that I had to deal in all probability with a malarial infection only, in spite of the fact that the report from my bacteriologist revealed the presence of a few streptococci in the uterine culture, while that from the vaginal remained entirely sterile. Acting on my increased belief in the malarial origin of this complication, I ordered a double dose of the quinine to be given at midnight—in other words

about four hours preceding an expected morning chill. On calling the next forenoon I found that the chill had not appeared, as previously at 4 A. M., I therefore ordered another double dose of quinine to be given at 10 A. M., again preceding the expected afternoon chill by a matter of four hours, the single doses being administered as usual. To my delight my patient had no chill on the afternoon of this day and under the same course of medication escaped the anticipated seizures of the following morning and afternoon.

This brings us up to Saturday, or the ninth day of the puerperium, when the patient, exhibiting signs of cinchonism and having passed two full days with no malarial manifestations, and a constant normal temperature, respiration and pulse, together with a general sense of well being, I concluded it safe to omit the double doses which she had previously received at 10 A. M. and at midnight. On Sunday forenoon, on making my usual call, I discovered she had again experienced a slight chill at 4 o'clock in the morning, and her temperature registered 101 deg. Anticipating a return of trouble, in consequence of too early abatement of anti-malarial treatment, I ordered the double doses to be again resumed, accompanied by the single doses as before. At about 3 o'clock of that afternoon, much to my dismay, I received an urgent call to this case. It not being convenient for me to respond immediately I requested my associate to go in my stead; he had hardly had time, however, to reach her residence when I received a still more urgent message that I "*must come at once, that the patient had had convulsions.*" Upon arriving on the scene I confess that my heart sank within me. I learned that Mrs. F. had, at about 3 o'clock, experienced a severe chill, followed by three equally severe convulsions. Her condition when I arrived appeared most desperate; she was pulseless, unconscious, bathed in a profuse, clammy perspiration and presented a temperature of 107 deg. per vaginam—in fact she exhibited all the appearances of a most profound collapse, and everything indicated a speedy dissolution. Fortunately, however, my associate had already administered a full dose of digitalin hypodermatically, together with a quantity of brandy by the same method. These remedies were repeated by us twice during the succeeding hour, when her pulse began to return and her general condition to improve, accompanied by a material drop in temperature, so that after a time I felt safe in leaving her for a few hours. Upon visiting her that evening I was greatly encouraged to find that her temperature was normal, consciousness fully regained and pulse satisfactory. Determined now to take no further chances of a recurrence of this pernicious malarial explosion, I kept her, for the next succeeding several days, saturated with quinine to the extreme limit, both by hypodermatic and oral administration—in fact for a week a most pronounced condition of cinchonism was maintained, with the result that no further malarial manifestation made its appearance. Her convalescence from this time on was steady and unimpeded. At no time in the *entire* history of the case was there any abdominal tenderness or fetid condition of the lochia. After the first preliminary cleansing of the genital tract she received no further antiseptic treatment. I should have mentioned, that coincident with the taking of cultures from the vagina and uterus, I secured a specimen of her blood which showed the unmistakable presence of plasmodia.

As a further proof that the case was in nowise a septic one, I would call attention to the fact that had it been due to septic infection, the preliminary antiseptic treatment, evidently, did not control the condition, for we find the patient suffering from several recurrences of chill, high temperature, etc., terminating in the terrific explosion on the tenth day, and with these persisting symptoms, accompanied as they were by the final most formidable ones, the patient must surely have succumed to so severe a septic condition, which only received the one—and that somewhat meagre—antiseptic treatment; while on the other hand the proven presence of the plasmodia in the blood and the distinct periodic character of the symptoms, together with the prompt and efficient result of anti-malarial treatment, can leave no doubt in any reasonable mind that the only complication in this case was a distinctly malarial one. Just here it is interesting to note the occurrence of an undoubted pernicious form of the disease in a locality where it is claimed by many, that this form of malaria never exists.

A practical point in passing is the occasional superiority of clinical evidence over the results of bacteriological investigation or entire dependence on instruments of precision, etc.

It will be noted that the report from the uterine culture showed the presence of a few streptococci, and to one who follows absolutely the most modern methods of diagnosis, would indicate sepsis as the etiology in this case.

On the other hand the clinical aspects of the case, viz: pronounced periodicity, absence of certain well known symptoms of

local infection, and the prompt result of anti-malarial treatment so overshadowed the presence of a few streptococci that one who weighs all sides of a case carefully must necessarily discard the streptococci as a cause and adopt the purely malarial hypothesis.

Thus while remembering the great importance of modern aids to diagnosis let us guard against becoming one-sided, and remember that our predecessors often obtained excellent results before the present age of microscopes, cultures, etc.

To summarize: Let me enforce upon my readers that all puerperul fever is not septic; that the next most frequent cause of fever in the perineum is probably malarial; that it is our duty when confronted by a suspicious case, to make an accurate diagnosis by means of bacteriological cultures together with clinical symptoms, and blood examinations, at the earliest possible moment, while we treat our patient in the interval, before reaching a positive opinion, from both standpoints; and that finally, when the true nature of the complication is revealed, we should use the most active and up-to-date measures for the treatment of the same.

Streptococcus Infections.

By Frederick C. Taylor, M.D., Cleveland, Ohio, Lecturer on Histology, Cleveland College of Physicians and Surgeons; Visiting Surgeon St. John's Hospital.

While it is claimed that the introduction, aseptically, of various chemical compounds, such as croton oil, turpentine, etc., into the living animal tissues, may produce suppuration, it is questionable whether this is ever true. Suppuration under such circumstances may certainly ensue, but in all probability there is a bacterial infection as a primary cause. Not that the bacteria must necessarily be introduced with the foreign material—the vitality of the part may be impaired by the irritation, its resisting power weakened and micro-organisms, heretofore latent or held in subjection in the blood or tissues, gather at the spot, multiply, inaugurate a destructive campaign and a suppurative inflammation ensues.

The weight of evidence is overwhelmingly in favor of the view that suppuration without bacterial infection never occurs.

The power of causing suppuration is not confined to one specific bacterium, but is common to many species, the most important of which are the staphylococcus pyogenes aureus, albus and citreus, bacillus pyogenes fœtidus, bacillus pyocyamus, micrococcus gonorrhœa, and streptococcus pyogenes.

The staphylococci occur most frequently, but from a clinical standpoint, the streptococci are of more interest and of only a little less frequency.

Under the microscope the streptococci appear, as the name signifies, in chains—generally from five to ten immobile cells presenting the appearance of beads on a string; in cultivations on gelatine small whitish, slow growing colonies are seen separated one from another, having no tendency to coalesce or to liquefy the culture media.

Clinically streptococcus infections are characterized by their extreme malignancy—extension along the lymphatics, the general systemic involvement and the formation of metastatic abscesses.

Streptococci are present either as the single causative agent or together with other specific poisons, not only in localized lesions as laryngitis, pharyngitis, abscesses and pustules, but also in general pathological conditions classified under various heads.

In erysipelas, puerperal fever, ulcerative endocarditis, and osteo-myelitis, the streptococcus is always present, and is usually present in scarlatina, variola, yellow fever, cerebro-spinal meningitis and kindred affections. Indeed the streptococcus erysipelatis of Fehleisen and the streptococcus puerperalis of Frankel do not differ in the slightest degree either microscopically or under cultivation, from the classical streptococcus pyogenes. So much for etiology. Clinically in streptococcus infections we have a condition always serious, always of extreme gravity—not that our patients under these circumstances always die or are invariably in a critical condition—but the possibilities of serious complications are so great—the development of remote lesions so insidious, that it behooves us to be always on guard, never relaxing our vigilance until every vestige of disease is eliminated.

The local symptoms presented in this form of infection are the same as those of all suppurative bacterial invasions though usually of a somewhat more severe character, except the swelling which may be inconsiderable. In addition we have a marked tendency to lymphatic involvement and extensions through the lymphatic system with the formation of metastatic abscesses.

Large areas of induration usually surround the local foci often rendering the detection of pus difficult. When the superficial layers of the skin alone are involved the rapid breaking down of the cells "melting away" of the tissues leaving an angry, exceedingly

sensitive surface behind, is very characteristic.

In addition to the usual manifestations, the constitutional disturbance is most marked; the temperature not always high, but persistent and in advanced conditions often suddenly becoming subnormal. Pulse rapid, full, and later becoming weak, irregular, and not responding readily to the ordinary cardiac stimulants. The patient presents a picture of septic intoxication out of all proportion to the local lesions. It is this toxæmia that renders the disease so serious, and it is this condition that must be persistently fought, if we would restore our patient to health. The indications for treatment are simple—thorough and complete evacuation of the pus and removal by curettage or otherwise of all necrosed tissue. Energetic antisepsis must be the rule and rigidly adhered to. It is not sufficient in these cases with localized foci of infection to simply open and drain—every portion of the infected area should be exposed that antiseptics and germicides may have easy access.

Cut wide and deep—scrape or dissect away all broken down tissues and use powerful germicides freely.

While watching the local lesions do not lose sight of the general conditions—tonics, stimulants, agents that inhibit the development of bacteria should be used persistently. In addition to iron, quinine, strychnia, and alcoholics, any or all as the conditions seem to demand, aromatic sulphuric acid seems to exert an almost specific influence in these cases. Ten drops well diluted, three times daily, has in my hands proven most satisfactory.

I wish to report two cases of streptococcus infection coming under my care—one interesting from the remote secondary manifestations, the other from its close resemblance clinically to an anthrax infection.

Case 1.—Mrs. T., aet. 62, well nourished and in good general condition, consulted me for a severe pharyngitis, (I was at the time treating sore throats in three other members of the same family.)

The pharynx was red, angry looking, little exudation, but exceedingly sensitive. Temperature 101.5 deg. F., pulse 110, full and bounding, severe headache, and chills. The pharyngitis proved stubborn, resisting for several days all treatment. It finally yielded, but the general condition did not improve. After a few days my attention was called to the middle finger of the left hand, where I found a small subcutaneous drop of pus over the terminal phalanx; this was cleared away and a moist bichloride dressing applied. At this time the patient was taking pyrophosphate of iron, quinine and strychnia every four hours. The next day the conditions were not improved, the entire finger was swollen, a red line up the arm and tenderness of the axillary glands denoted lymphatic involvement. The general condition was exceedingly grave—a perfect picture of septic intoxication.

Under local anesthesia the finger was freely incised, bichloride fomentations applied, and aromatic sulphuric acid internally ordered.

The improvement was steady—though a considerable amount of tissue sloughed out; and my patient was soon up and around, and made an uninterrupted convalescence.

Here we had a mixed infection—streptococcus complicating a staphylococcus infection, and rendering a comparative mild condition one of great gravity.

Case 2.—Mrs. H., aet. 68, was admitted to my service at St. John's Hospital, October 28th, 1898. At the time of admission she was in a semi-comatose condition; temperature 100.5 deg. F., pulse 128, weak, intermittent, unquestionably profoundly septic. She was taken immediately to the operating room, and then, under general anesthesia, I opened five large pus cavities on the back—the largest contained sixteen ounces of thick, reddish, foul smelling pus, and the other four together about thirty ounces. Each abscess was opened with a cross incision, the contents evacuated, all necrosed tissue removed with a spoon curette, the cavity washed with a saturated solution of permanganate of potash, and loosely packed with iodoform gauze.

The general treatment as sketched above was conscientiously followed out. Her condition improved at first, but on the third day a septic diarrhea developed, the temperature became sub-normal, pulse weaker, intermittent and more irregular, finally coma and death, November 4th.

Her daughter entered the hospital at the same time having on both arms from wrist to elbow, pustules and areas of induration. She had been caring for her mother, and undoubtedly so infected herself. The pustules were opened, curetted, bichloride fomentations applied, and tonics and stimulants internally administered. She made an uninterrupted recovery.

On November 8th, I was asked to see Sister D., of the hospital staff, and found on her arms several pustules. She had waited on Mrs. H. from the time of her admittance, had cared for the body after the death, washed the clothing and bedding. The pustules proved very obstinate, new ones developing as others yielded to treatment, altogether fifteen to eighteen were present. In this case the general condition

was kept under control with quinine and sulph. acid, and the local lesions, after curettage, treated first with bichloride, later with formaline, resulting in complete recovery.

In these cases we have a perfect clinical picture of anthrax infection. In Mrs. H. carbuncles, in the others malignant pustule. At the time of the admission of Mrs. H. the facilities for bacteriological examinations were not at hand, and her condition did not admit of delay, but in the other cases cultivations proved a pure streptococcus infection.

These cases well illustrate the gravity of this form of infection, the severity of the local manifestations, and the remote secondary lesions, together with the ease with which other individuals may become infected.

In conclusion I wish to emphasize the importance from a prognostic as well as a therapeutic standpoint of bacteriological examinations in all suppurative conditions, of energetic local treatment, and in streptococcus infections especially, of close attention to the general condition.

128 Franklin Avenue.

Some Little Things on Drugs and Diet.

By Albert Bernheim, A. M., M. D., Paducah, Kentucky.

"I took Drake's Plantation Bitters and Ayer's Pills first, and then I discovered I had disease of the liver and kidneys. I saw the advertisement of S.-T.-1860-X, and I bought a dozen right off. Ayers' almanac taught me something about the human frame and I took Ayers' pills. I spent $200 on Helmbold's buchu, and I took that with Schenck's pills and pulmonic syrup, for something was the matter with my ungs. I changed off from Schenck's to Jayne's expectorant, and finally I got Piso's Consumption Cure; I think it did me good. I wanted to cure my digestion, so I got Vinegar Bitters and Rocky Mountain Bitters and Snyder's Aromatic Bitters and I took turn about, one dose of one and then of another. I cannot remember all I took. I kept a list once but I lost it. Yes sir, I went for everything.

I took Dr. Pierce's Pleasant Purgative Pellets, Radway's Ready Relief, Dr. Wright's Indian Vegetable Pills, Jayne's Pills, Schencks Seaweed Tonic, Hamlin's Wizard Oil (that was for my rheumatism) for which I also used Gargling Oil, Centaur Liniment, Kunkel's Bitter Wine of Iron, Cram's Fluid Lightning (that's when I had neuralgia), Hop Bitters—oh! I can't tell how many more—Pond's Extract, Sterling's Camphorated Ginger, the King of Pain, Vegetine, Fitler's Rheumatic Remedy and Kidney Cordial. I can't think of them all, and now I've got skin disease; I am using Cuticura remedies and Chinkalyptus.

I am not taking anything else now except a dose of podophyllin every Tuesday and Thursday mornings and Saturday night, and a bottle of citrate of magnesia next morning. Sometimes I take blue mass on Monday, but that is only during rainy weather. I forgot to say I have worn a liver pad for five years; and I think I am ruptured, and I also wear a truss when I am moving around much."

What is that? Is that an advertisement for the columns of a medical paper? Is it a history of a patient? It is not intended as an advertisement. The above is a history of a patient, written by the patient himself, written in a letter to a Philadelphia daily paper, about twenty years ago, by Mr. John F, Rigdon. I hope that Mr. Rigdon is still living in this vale of tears and slough of despond. Still, should he have left this worst of all worlds, I shall gladly hope that he is enjoying the best of health on the green and pink plains of the Elysium; and that he had or will have occasion to drink Lethe on the shore of the Acheron, where Chairon is waiting to carry him over for a penny (obolos) to the offices of Drs. Esculapius and Hippocrates, and to the drugstores of Medea.

This was only one account of medicines, taken by patients really sick and imaginarily sick. Mr. John F. Rigdon has many fellow-brothers and fellow-sisters. I shall not consider it as my duty to state the value or non-value of all these medicines. I shall not dispute that one or the other of this enormous number of patent medicines we have in America might have value, might do some good—to the patient perhaps not too much; to the manufacturer perhaps not too little.

To be short, much too much medicine is taken by the people of this country. Laveran, the French physician, discoverer of the malarial agent states in regard to malarial fever: "In a general way it may be said that in malarial districts far too much sulphate of quinine is given to patients who have no need of it, while a sufficient quantity is not given to patients suffering from paludism.*

It is sure that this doctrine is well justified as to America. And what is said here

*W. S. Thayer, Lectures on Malarial Fevers.

of quinine may be said of many other drugs too. Next to quinine, or perhaps more than this, we must name calomel. The infant is nursed on calomel and quinine, the child is impregnated with these drugs, and the old man or woman must learn to eat or swallow them if he or she had not got them in younger years. And what is the result. On the one side, may be, an impaired hearing or sight, on the other side a chronic disorder in the gastro-intestinal tract, beginning with the teeth and ending with the rectum, including liver. But I shall hear, quinine is the best remedy against malaria. Sure it is and must be taken in malarial fevers. But it is taken by the patients without prescription for everything and anything from a "Katzenjammer" and slight cold to typhoid fever and all other fevers. And calomel is taken for anything and everything, from a *fctor ex ore* caused by neglected teeth, to the acute gastritis and carcinoma of the rectum. I think that every doctor, in prescribing calomel, has a special view in doing so, at least I assume so. But it is the doctor who causes people to swallow quinine and calomel by ounces, at least the "doctors trained people for doing so."

But, to be sure, calomel is a good remedy too, for cleaning disturbed intestine. None will deny that. But what is the cause, in a large number of instances, of these disorders? One of the causes I shall name—only one, but this one I regard as not the most unfrequent. We eat far too much in America, more than necessary for the economy of our body, more than our stomach and bowels are able to dispose of, more than our gastro-intestinal tract can stand. Just let us take the bills of fare of one day (Tuesday) at our hotels.

Breakfast:—Oranges, stewed prunes, rolled oats, radishes, olives, green onions, broiled Potomac shad, fried roe, broiled sirloin steak, fried onions, baked apples with breakfast bacon, codfish in cream, fried mush, eggs and omelettes to order, potatoes, plain rolls, soda biscuit, griddle rolls, dried and buttered toast, maple syrup, New Orleans molasses, coffee, tea, cocoa, milk.

Dinner: — Cream of Barley, lettuce, radishes, green onions, baked white fish, butter sauce and potatoes, short ribs of beef, horse radish, sirloin of beef, drip gravy, young mutton with jelly, baked chicken pie, banana fritters, custard sauce, potatoes, stewed tomatoes, sweet potatoes, corn, egg bread, buttermilk, steamed pound pudding with brandy sauce, blackberry pie, cocoanut pie, apricot sherbet, ice cream, cakes, cheese, water crackers, coffee.

Supper:—Bouillon, radishes, lettuce, young onions, salt mackerel, fried codfish balls, broiled sirloin steak, mushrooms, sugar cured hams, chipped beef in cream, eggs and omelettes, potatoes, cold roast beef, baked beans with bacon, split rolls, biscuits, rice cakes, toast, pears, coffee, tea, milk.

You, of course, will say it is not necessary to eat all this! You are right in saying so, but we see that, indeed, many people eat the whole bill of fare the "full line," and that not only men but women too, young girls and children. In fact, you must at times, wonder where these young ladies (not to speak of men) will find the space to store all these eatables, and how they will have power enough to digest them in good health. For a while we will be able to dispose of them, and we are getting stronger, but some time after, stomach and intestine will not do any longer, because they cannot, it was too much work for them, and the result of it is an atonic stomach and atonic bowels, constipation, stasis in the circulation of the blood, gastric catarrh, sluggish liver and—calomel. It might do good, and the circulus vitiosus begins anew, until even calomel cannot remove the disturbances of the body.

If we would test such a daily food upon its amount of albumen, fat, starch and sugar, we would find a quantity much too large for the amount stipulated by the champion of physiologists as to the animal economy—the Munich professor, Dr. Karl von Voit. Even the most recent researches state that the quantity named by Voit might still be reduced. Voit makes out three different stages, one for the man being at rest, the second for the moderate-working man, the third for the hard-working laborer. But it is the irony of fate that the man who might be able to stand such a circumstantial and compact food, namely the working laborer, is not able to have it, while the man who can afford to have it, is not likely, capable, of overcoming such a quantity of food.

But somebody will inform me that this is a hotel bill of fare, and that in the general household the *menu* is not so extravagant. I shall admit that it is not *so* extravagant, but it is, anyway, prodigious enough and certainly more than necessary, far more, indeed.

I *will* make concession to a hearty dinner and, be it so, a hearty supper too, but the American breakfast is too vast. If it is true that a yankee gunner has said to commodore Dewey, "to hell with breakfast; let's finish 'em now!" we have proof and evidence enough that we can destroy a

whole Spanish fleet without even a breakfast. Certainly it is not my intention to banish the breakfast at all, but the enormous breakfast should be avoided because it is not necessary.

An old German saying runs: "Ein gutes Ruchlein ist besser als ein Bruehlein," (a little repose is better than a broth). And when could we apply this saying better than for the morning? We had rest and sleep for several hours, we have been strengthened, and we need not the hearty breakfast, A cup of coffee, or tea, or cocoa, some bread perhaps, with butter, maybe an egg or two, I should think it is enough, and I know it is. If somebody prefers oatmeal or some other gruel, he may eat it. The majority of people, as a rule, are not hungry in the morning just after they get up—but they eat the hearty breakfast nevertheless, many, probably, with the intention to prevent the hunger to come. Quite a different state of affairs it is if you get up in the very early morning and you have done some work; after that a hearty breakfast might be in the right place.

But most of the physicians will agree with me if I say it is very hard to combat stomach troubles and disorders of the bowels by means of diet. Not that I mean to say that diet is not one of the best remedies, it is often the remedy—but because the patient has been trained and educated for drugs. Very often they will leave you and go to see another doctor who is quick and very ready to prescribe some medicine. Yes, this medicine relieves the patient and the trouble that re-appears very soon is relieved by the refilling of the prescription, may it be now blue mass, or calomel, or sulphate of magnesia. The patient regards this medicine as just as daily a food as he does bread: but sooner or later it will not help any longer, and the harm that is done, is due not to the patient alone, but more so to the quick and ready drug doctor.

I shall indeed not deny the value of drugs, but it is my opinion that this always and ever writing doctor does more harm than a Mauser rifle. I shall not indorse the nihilism in medicine of half a century ago, but we had better train the patient and educate him to the understanding that not all of salvation depends on drugs, but some of it—and not the least—on hygiene, hygiene in the widest sense of the word. Sometimes you cannot help in meeting with one prescription or another that chills you not a little. Such a prescription, at times, looks as if the doctor would have read the index of a book on materia medica and taken from it a number of drugs, put the quantity on their side, and given that as a prescription. Chemistry, you cannot see in it, because very often it is nothing but a dirty mixture; physiology you will hardly be capable of discovering in it; very often the one drug neutralizes the other, and this then is the most fortunate thiug, because the mixture is hereby prevented from doing evil. If you see a doctor's prescription, of a so-called light of a physician—a mixture of antikamnia, antifebrin, calomel and tannic acid (many a man does not know that antikamnia contains antifebrin) and that the patient gets well, I should think that he got well in spite of the medicine, and this shows evidence that the human body not only can stand large quantities of food, but that it can overcome even some medicines.

Another time troubles of the stomach and the alimentary system might be cured or rather prevented, not so much by drugs, as by precautionary measures. Some years ago an English medical paper brought out an article on the temperature in the mouth after cold and hot drinks. I made some experiments on myself and found high elevation of the temperature after drinking hot liquids or after gargling with them, and then again a fall of the temperature after ice water and ice cream; the difference between the highest and lowest temperature was as much as nine degrees, from 96 to 105 degrees F. What you may find the case in the mouth, is liable to be found in the stomach too, perhaps not to an equal extent. Should we wonder when the quick change from hot coffee to ice water would produce disturbances in the stomach and œsophagus, and last not least in the structure of the teeth. Like the enamel of a pot will crack if you expose it alternately to hot water and cold water for any length of time, so the enamel of the teeth will vanish by maltreatment too, and not the least, by exposure to hot drinks (120 degrees and higher) and cold drinks (40 degrees and lower to ice temperature). One of the coldest and at the same time most harmful of this kind is, in my opinion, ice cream with soda. Another point I often hear is the "ice cold beer." Ice cold is not the way to drink beer. Very often I have heard men say, or women, "I cannot drink beer, it makes me bilious." I say it it is not the beer that makes bilious, it is the ice cold temperature that has this effect. Beer is, without doubt the least harmful of all the alcoholic drinks, quite especially because the percentage of its alcohol is low, and because beer alone contains some other nourishing substances, like malt, sugar and salts. But never drink beer with a tem-

perature below 55 degrees. F.—cool beer but not ice-cold beer.

Another fact that should be accounted for in disorder of stomach and intestines is the too large use of fat. Butter and lard, anywhere and everywhere, and I mean particularly the simultaneons use of butter and meat. Some one has said, there are three different zones noticeable in the use of fat. The zone of fish oil, the zone of lard and butter and the zone of vegetable oils; these zones are arranged here from north to south. He who turns his attention to this will find that this is quite correct, and if here in the South we must use fat, let it be olive oil, and not lard or butter.

A friend of mine, who lived for many years in the far east, in Java and on the Philippine Islands, told me that in those countries he began to understand the prohibition of Moses in regard to pork and the mixing of flesh and milk. He said nobody will eat meat and butter, or drink milk, at the same time, and when he does eat, he has to atone for it by troubles of various kinds. Let us give a short summary of the above:

1. The physician shall prescribe less prescriptions and look rather for the hygienic conditions of life in the patient.

2. Correct and proper diet can do more good to a patient, because it prevents disease, and "a grain of prevention is more valuable than a pound of cure."

3. The patient will follow the advice of the doctor, if the patient shall have been educated and trained for this method of treatment.

4. The doctor must have studied physiology and physiological chemistry, and must not copy the drugs in his prescriptions just as they run to his eyes, and must not give prescriptions because the patient asks for one. Very often the patient does not think it a medical service if he will not be able to bring a paper to the drugstore.

5. Hot drinks and cold drinks don't agree simultaneously.

6. Avoid the mixing of meat and too large quantities of butter, and keep from animal fat, quite especially in summer time, and more particularly in warmer regions, such as here in the South.

Otitis Media Chronica.

By J. H. McCassy, M. A., M. D., of Dayton, O.

Suppuration in the middle ear has a death rate of 2½%, and is nearly as fatal a disease as typhoid fever. In this disease a slight cold may precipitate a fatal mastoiditis, meningitis, or septicæmia. The victim of this disease who fails to put forth every laudable effort to have himself cured, voluntarily sleeps over a deadly volcano. The frequent earaches in children during damp or cold weather, are often the forerunners of suppuration in the middle ear. Among the most frequent causes of this disease are naso-pharyngeal catarrh, dentition, scarlet fever, measles, diphtheria, whooping cough, phthisis, and the diving or ducking of the head. Even hunting dogs that dive, have otitis media and become deaf. In the battle of Santiago de Cuba, eight out of the ten casualties upon the American ships were rupture of the ear drums due to the terrific cannonading, because the men were on deck for inspection, when Cervera's ill-fated squadron made a dash for the open sea, and the men rushed to their guns and began blazing away, without taking the customary naval precaution of plugging their ears with cotton.

In the human anatomy there are four centres for maintaining equilibrium. One is located in the skin of the feet, another in the stomach, a third one in the eye, and the fourth in the ear. Disturbance of any one of these will produce dizziness. Otorrhœa, if unchecked, will in time invade and disturb this function of the ear, impair hearing and health and unnecessarily often result fatally. Too frequently, through neglect, otorrhœa passes beyond the middle ear, and by invading the labyrinth causes a condition known as Meniere's disease. In this disease a plastic exudation into the mucous membrane and labyrinth interferes with the function of the cilia or auditory hairs in the conduction of sound waves, thus producing deafness. The exudation also interferes with the function of the auditory nerve through its connection with the cerebellum in controlling equilibrium. Giddiness and vomiting in this disease is accounted for by the close relationship that the auditory hairs bear to the stomach. In irrigating the ears of many patients the water pressure affects the labyrinth and produces temporary dizziness, and, occasionally vomiting.

It is not the nature of otorrhœa to remain stationary or harmless. It rarely gets well without treatment, but invariably tends toward destruction of the ear, if not of life itself. The reason of this is, the glandular element is scant in the otitic mucosa, and the membrane here serves the double function of periosteum and mucous membrane. This accounts for the frequency of necrosis following otitic inflammations. Among the ossicles the incus is the most often necrosed, because the blood supply to it is from

one small artery, which is easily occluded, any slight pressure from swelling being sufficient.

Treatment:—After free drainage has been established next comes cleanliness. Irrigaton with sterilized water, with or without the addition of such antiseptics as bicarbonate of soda, boric acid, carbolic acid, corrosive sublimate, etc., has a well established place in the treatment of suppuration of the middle ear. In ordinary cases it is not necessary to add antiseptics to water that has been boiled. But in irrigating the attic, a solution of salicylic acid in alcohol and ether will penetrate well into small crevices because it has a lower surface tension than water. In attic snppuration the intra-tympanic canula is indispensable. The use of this instrument is somewhat painful and at times intolerant to the patient but can be overcome by gentle persistence.

Removal of the bad odor is a very good index as to the success of treatment in atorrhœa. Any treatment that fails to remove the bad odor in due time is not succeeding, and a change must be made. Caries and necrosis in the tympanum should be dealt with in the same manner as in other parts of the body. Granulations, cholesteatoma, carious ossicles, necrosed bone, and other obstructions to free drainage should be detected and removed. The Eustachian tube should be kept open and ossicular stiffening should be prevented by massage. Dressing the ear with liquid antiseptics is of little value, because of the necessarily weak solution used and speedy evaporation leaving only a small residue of the drug.

In otorrhœa we may presuppose that there is perforation of the drum and for this reason some of the good antiseptics are contraindicated. For example, corrosive sublimate should be used, if at all, with great caution, else poisoning may result by its passing down the Eustachian tube. Peroxide of hydrogen decomposes on heating, this necessitates its employment at the temperature of the surrounding atmosphere, besides it is an unstable drug, and is often a positive irritant. When it comes in contact with pus gas is evolved. The pressure thus exerted tends to seriously damage the middle ear. Placing it in contact with pus in small cavities is like putting the two parts of Seidlitz powder into the stomach, one after the other. It is quite apparent that peroxide of hydrogen has no place in the treatment of otorrhœa.

Boric acid in powdered form has been long and extensively used in the treatment of otorrhœa. It has proved itself a safe and a useful drug. Notwithstanding the fact that used in the powdered form on abraded surfaces it produces local irritation, and forms flakes and crusts with inflammatory products. Iodine is the antiseptic of all antiseptics, among the non-metallic elements, being obtained from kelp, the ash of certain sea-weeds. Iodoform is obtained by the action of iodine, in the presence of fixed alkalies, upon alcohol or ether, and contains over 96 %, by weight, of iodine. Iodoform acts as an antiseptic by evolving its iodine. It is a great antiseptic and it is a pity that its offensive odor almost precludes the possibility of its use in human practice, especially in ordinary chronic diseases of the eye, ear, nose and throat, and other diseases where the patient mingles with the general public. When a patient gets a whiff of it once, he knows what you are using. Iodoform may be universally employed by the veterinary surgeon, but not by the aurist. I am glad to know that the ingenuity of the chemist has produced a preparation equal to iodoform in antiseptic and healing properties, that is odorless. I refer to nosophen, which is obtained by the action of iodine on solutions of phenolphtalein and contains over 61 % of iodine. Nosophen, like iodoform exerts its antiseptic properties by slowly evolving its iodine. I have used it in a large number of cases where I formerly used boric acid and I am convinced of its signal power in checking bacterial activity, and in absorbing inflammatory products, and otherwise promoting rapid healing in suppurating surfaces and cavities. The following detail is very essential for the successful treatment of otorrhœa: Irrigate the ear daily if possible, mop dry with cotton each time. Put, say five to ten drops of a 2 to 4 % solution of nitrate of silver into the ear; wait for one or more minutes, again irrigate and dry with cotton; then dust in some nosophen powder, aristol or boric acid, and close the ear with nosophen, or borated gauze. Neither the powder nor the gauze should be put in so tight as to cause pressure in the middle ear. Nosophen has the advantage over boric acid of being a better antiseptic, less soluble and non-irritant. Nosophen gauze contains 3% of nosophen; it is equal to iodoform gauze in antiseptic properties, and being odorless renders it preferable. Besides, the iodoform gauze on the market contains 10% of iodoform, which is far too strong. Some years ago I used this gauze as dressings after cataract and other operations, but was forced to discard because it produced unpleasant irritation and blistering of the skin. The fact that nosophen is odorless and can be sterilized up to 220 degrees C., without decomposing, gives it a decided advantage.

I lay great stress on the use of dry dressing and gauze protection in draining and healing chronic suppuration of the middle ear. If repeated instillation of alcohol fails to remove masses of granulation tissue from the ear it may be necessary to resort to stronger escharotics or even the curette. In places where the actual cautery can be applied it is better than drugs such as tinct. iodine, nitrate of silver, chromic or trichloracetic acid, because such drugs spread and attack some of the surrounding healthy tissues. The two latter should be sparingly applied in saturated solution with a small amount of cotton on a fine cotton carrier to very limited areas for fear the facial nerve or other important structures be injured. Many cases of facial paralysis have been caused by disease in the ear. Occasionally a like result follows accidental injury to the facial nerve by escharotics and operations on the ear.

I will conclude with a few words on closing drums: An ear-drum suddenly perforated or removed has little or no effect on hearing for the time being, but its absence permits exposure of the delicate structures, and, in time great damage to the hearing will follow. For this reason diligent endeavors should be made to close the perforation or reproduce the drum. Healing must take place from the bottom up. So long as there is a discharge of pus from the middle ear it will be useless to attempt to close the perforation. Being well assured then that this important preliminary step has been accomplished, and if the perforation shows no signs of disappearing touch the margin of the site of the drum carefully with a saturated solution of trichloracetic acid; irrigate before and after using the acid; repeat the use of the acid weekly, if necessary. Supplement this by touching the same margins twice to four times a week with a solution (2% to 4%) of nitrate of silver which promotes granulatiion and closure of the perforation by inducing swelling of the parts. When the drum closes the hearing may be diminished owing to thickening of the drum, but in a few weeks to a few months this thickening will disappear and the hearing will return; irrigate before and after using the silver. Dust in some nosophen powder and close the ear with gauze. Gauze possesses much greater power of absorption than absorbent cotton and affords much greater protection. No cases require more nicely selected antiseptics, delicacy of application and punctuality in treatment than these. In one case lately the drum was nearly closed on two different occasions, but each time the patient absented herself for one whole week. This neglect resulted in a set back each time. The patient was assured that unless she could come for treatment daily it would be a failure. After this she came for treatment daily and the perforation was closed in two weeks. The treatment of these cases is like hatching eggs. Delicate instrumentality must be punctually and assiduously applied.

Bright's Disease—Malaria.

By J. A. Reagan, M. D., Weaverville, N. C.

After having practiced medicine for many years in this mountain section, including some six counties, and never having seen a case of Bright's disease. Some twenty-five years ago I became anxious to know why there was no cases in this section of the country, and my mind was directed to malaria as the leading cause of the disease. There is no malaria or malagua in this mountain region between the Blue Ridge and the Alleghany range, which divides North Carolina from Tennessee.

I saw most of the old physicians of this section, and told them my impressions. All said they had never thought of it. but there might be some truth in it. Dr. Cain, who after graduating in this country, went to Europe and completed his medical course, practiced in Charleston, South Carolina, some twenty years, but after the war settled in Asheville, said he had only had one case of Bright's disease since he came to this State, and that gentleman was in the habit of driving stock to South Carolina every fall, and was in this way liable to malarial attacks; that he would willingly give me all the help I desired in pursuing the investigation. He died some years back, but in my last talk with him on the subject he said he was convinced that malaria had a great deal to do in causing the disease, if it was not *the* cause of it.

I wrote an article that was published in a Philadelphia Medical Journal, some twenty years ago, calling the attention of physicians practicing in non-malarial sections to this subject, and asking their opinion in regard to it, but I have never heard of any one noticing it. Perhaps they were willing to tread in the old track until some German professor should make the discovery, and then they would herald it to the world and at once embrace it. Well that time has about come. An editorial in the Journal of the American Medical Association:

"In this connection recent studies which have been made concerning the influence of malarial infection upon the kidneys are of great interest, and i seems to be the uni-

versal experience of those who have made a careful study of malarial infection that albuminuria indicating renal difficulty due to malaria is exceedingly common. Thus Osler states that it occurred in 46.4 per cent. of the cases in his ward." He also quotes Thayer, Kerley, and Fruitnight as endorsing the theory that malaria has a wonderful effect in causing kidney diseases, even in children in malarial sections.

Since I began this investigation, twenty-five years ago, I have had two cases. One was a boy, some ten or twelve years ago, whose mother moved here from Georgia. He was in the last stage when I saw him. I tested his urine and found one-third albumin. I saw him but once, as he died in a few days after I saw him. I told his mother I could do nothing for him when I examined him. The other was a gentleman who had been frequently exposed to malaria, and years back had had several malarial attacks. So after an investigation of some twenty-five years, my mind is firmly settled that malaria has more to do in producing that distressing disease than anything else. If this be the case, may we not change the treatment so as to be more successful in relieving this distressing disease?

Syphilitic Sore Throat.

By John S. Moreman, M.D., Obstetrician to St. Ann's Maternity Hospital, Louisville, Ky.

It has been estimated that one-third of the civilized world have either inherited or acquired syphilis, but this estimation if correct is astonishing and hardly believable, for one would not like the idea that out of thirty of his friends ten have this dreaded disease. This proportion is too large, but notwithstanding there is more syphilis than most people, physicians or laymen, imagine, and the physician often sees it in patients where there is no suspicion that it is prevalent. The eye specialist recognizes it in the changes of the retina, the gynecologist in the women with frequent abortions, the neurologist in nerve changes, the throat doctor in pharynx, and in fact all the profession recognizes it in their special branch. The attention is especially called to the manifestations of it in the pharynx, including the gums, tonsils and soft palate.

Syphilis in the region of the throat is often seen from the primary lesion too late in the third stage, even twenty years or more after the primary lesion. Next to the genito-urinary organs the tonsil is the location of the chancre frequently, acquired by the permiscuous use of drinking vessels, tobacco, pipes, etc., and when appearing on the tonsil there is very little difficulty in recognizing the lesion. It has all the appearance of the chancre of the penis, but in this location there is a great deal more pain and discomfort, and the glands behind the ear and in the neck are sooner involved. The treatment is similar to that for a chancre on the penis, and that method being familiar will not be given.

What is still more important to recognize is the appearance of symptoms of the disease in the throat during the secondary and tertiary stages. In the secondary stage, even before the characteristic spots have made their appearance, the patient will complain of a sore throat which gives him a great deal of pain on swallowing, and even water is unbearable. The pain may come on very suddenly, develop in one day or gradually the pain gets worse and worse from day to day until they have to appeal to the physician for relief, and unless recognized the treatment given will be useless. Examination of the parts may not show any ulcers, and often it takes careful search to find them, for a little one behind the tonsil or above the soft palate will escape observation. A very small one will cause the whole pharynx and adjacent parts to be very painful. Often the parts are not reddened, except in the immediate neighborhood, but in a few cases everything will have a deep angry reddened appearance. If the ulcer or patch is discovered it has a punched out appearance, reddened edges, indurated and will have an excavated appearance; the growth can be observed from day to day. The surface of the lesion sometimes has a yellow pus on it, but if it is in a position where the swallowed saliva passes freely over it, it may be washed very clean and will not show an accumulation of dead tissue. This is caused by a constitutional disease, and the ulcer patch is the local manifestations of it, and the treatment should be mainly constitutional and not local. The local treatment is to keep the parts as clean as possible, which will facilitate healing, but not cause repair. Cleansing agents commonly used are a strong solution of the nitrate of silver, bichloride of mercury, carbolic acid, permanganate of potassium, and similar antiseptics applied thoroughly with a cotton applicator, and should be used two or three times a day. The old idea that the lesion should be curetted or burnt-out with the electric cautery or the actual cautery is not practised to-day as much as formerly, for we know more about the etiology and our attack on the disease is in the right direction. The use

of the stick of nitrate of silver is nevertheless good.

Our great specifics for syphilis is the iodide of potassium and mercury, but in this condition the mercury acts too slow, and being able to get the patient under the iodide of potassium treatment quicker we are able to control the effects easier. As we get the patient under the iodide the lesion heals and often will get well in a reasonable time, but we should not stop the administration as soon as the throat symptoms disappear, but continue it for a long time.

In this class of patients, the syphilitics, we find a great many whose systems are thoroughly effected with the germ and their general health is very poor, and we want a good tonic and also an elimination of poisonous material, and iodia, in teaspoonful doses, three or four times a day, has this delightful effect, for it has combined in each drachm five graims of the iodide of potassium and three grains of the phosphate of iron with stillingia, helonias, saxifraga, menisperum with aromatics to make it as palatable as possible, and increasing or diminishing the dose we can get any amount of the ingredients required. It is claimed that in syphilis the mercurial treatment should be kept up for at least two years or, better still, three years, after all signs of the disease have disappeared, but in the use of iodia this long period of trertment is not necessary, and one or one year and a half of the iodia treatment is sufficient. Hot baths, in connection with the treatment, will facilitate matters.

Sometimes these ulcers are allowed to continue so long without treatment that the result is a loss of tissue and adhesions between the different parts take place and the soft palate becomes adherent to the posterior wall of the pharynx for which there is no radical cure. We have cicatricial tissue to operate on, and if cut there, it is sure to be followed by a loss of tissue, and in a few instances a fatal gangrene has resulted. The best operative means to give relief is the use of a dilator which should be used every day for an hour or two, but even then the opening between the pharynx and the posterior nares slowly closes until often it is only the size of a pencil.

In the tertiary stage of the disease we may have the mucous patches with all the discomforts accompanying it, and when this occurs we use the same line of treatment. In this stage we see a form of sore throat where there is no active lesion, no patch or ulcer is found, but the patient complains of a continual tightness about the throat, pain on swallowing, and an examination only reveals a reddened condition with hyperesthesia, and even the effort to open the mouth is painful. This condition is very similar to rheumatic sore throat, but this latter disease is effected by changes in the weather, whereas syphilis is not materially effected by it. A careful examination of the patient with the history will show that there is syphilis in the system, and the treatment must be with the iodia and in good size doses, for if allowed to run on without proper remedies we eventually, after several weeks, have an ulceration in the pharynx which takes the course of the lesion seen in the secondary stage. In examining a patient who complains of the throat, a post-nasal examination should be made with the mirror for the lesions have been found on the upper side of the soft palate and unrecognized there, after some weeks of local treatment with sprays there is sure to be a perforation of the palate, and when it is seen on the lower side then the anti-syphilitic treatment is instituted, but too late to cure without leaving deformities.

Hyperæmia of Conjunctiva.

By Edw. W. Wright, M. D., Brooklyn, N. Y.

Congestion of the conjunctiva is not a serious condition, though it may be so troublesome, so annoying, so persistent, as to prevent the comfortable and proper use of the eyes.

Hyperæmia is really more a symptom than an affection. Its duration may be transient, and its effects soon forgotten ,or it may be constantly present and its results always troublesome.

Hyperæmia of the conjunctiva differs from conjunctivitis. In hyperæmia there is an increase of tears; in conjunctivitis there is pus or mucus in varying proportions.

In hyperæmia we find the blood-vessels dilated, especially those on the palyebral portion of the lower lid. The inner and outer corners of the eye are involved more than the central part. When well marked, the congestion may extend to the caruncle and on the sclerotic. Furthermore, we often have a general suffusion of the conjunctiva which is in marked contrast to the normal conjunctiva. The normal yellowish pink of the conjunctiva is changed to a general redness, while the blood-vessels in meshes, or parallel columns, are plainly visible.

At times the congestion gives rise to little complaint, while again it is so annoying, so irritating, that reading and writing is carried on with distress. While congestion

of the conjunctiva is a very mild condition in comparison with some other affections of the system, it yet has a retarding influence on the amount and success of work and pleasures obtained by the use of the eyes. The insistence and persistence of this hyperæmic condition mars the pleasure of writing, reading and other duties.

The constant hot burning sensations, the itching of the lid-margins and the watering of the eyes are the leading indications of its presence.

Sometimes complaint is made that "sand" is in the eyes. Others speak of heaviness of the lids, especially in the mornings. Smarting, pricking, itching are the expressions frequently used to express the condition.

By looking at the conjunctiva lining the under surfaces of the lids, we observe the increased number and size of the blood-vessels and a deeper redness in the coloring of the conjunctiva.

All these conditions are intensified by artificial light, consequently there is more complaint at night.

The light of the theatre and the glare of the sunlight on water give additional annoyance. If the blood circulation be increased by exertion, food or stimulants we find the hyperæmia more marked.

Lids that are snugly and firmly applied to the eyeball suffer most.

The greatest sufferers are those who have eye-strain. In addition to their asthenopic troubles the hyperæmia is quite a factor. Sometimes patients complain more of the hyperæmia than of the eye-strain. When the hyperæmia is due solely to eye-strain, it is frequently noted that the vessels are clearly defined. They run in parallel lines from the margins of the lids backwards. This is most marked in the morning. At night, the use of the eyes through the day may add a general suffusion of redness.

In protracted cases, the congestion has lasted so long that the papillæ are swollen and visible, and the mucous membrane is somewhat thickened, presenting the appearance of granulations.

Causes.—Impure air, strong or cold winds, dust, smoke, hot and dry atmospheres, foreign bodies, as chalazion, displaced cilia or affection of the lachrymal passages.

Those who smoke, or use alcohol in excess, have hyperæmia. Nasal catarrh is frequently accompanied by congestion of the conjunctiva.

Eye-strain is the cause of the majority of the protracted cases. When the eyes are subjected to constant use, especially at near and small objects, the strain is manifested in congestion of the lids. In those who have hypermetropia, or myopia, or astigmatism, or insufficiency of some of the extraocular muscles, we find evidences of eye-strain. The hyperæmia may be the first sign of eye-strain and precede the headache, the aching eye, or the pain behind the eye. Sometimes the glasses worn are not adjusted properly, and this will be another cause of conjunctival congestion.

Treatment.—Of course, the first step in the treatment is the removal of the cause. If very bright light, or cold winds, or dusty occupation, then wear colored or clear protective glasses. If the air of the room is too hot and too dry, then lower the temperature and increase the humidity, the latter by placing open vessels containing water about the rooms. The nasal catarrh should have direct and proper treatment.

For the hyperæmia cold compresses for ten minutes, two or three times a day, are often very grateful and very beneficial. Cold water douche from fine needled jet, or a spray of water and alcohol, over the closed lids is of marked assistance. In eye-cup, with lids open, in lotion for thirty seconds, using a solution of common salt, (gr. ii—ʒj) or

Sod. bibor gr. ii,	or ac. boric gr. x.
Sod. chlor. gr. i,	aqua camp. ʒiij.
Aqua ad. ʒi.	aqua ad. ʒi.

or instillations of two to four drops every two to four hours of a lotion of ac. boric gr. viii., or sod. chlor. gr. ii., aqua rosæ ʒi.

℞ Ac. boric. gr. x, or sod. bibor gr. i.
Spts. camp. ♏v., aqua camp. ʒii.
aqua ad. ʒi., aqua ad. ʒi.

In chronic conditions where the mucous membrane is somewhat thickened and the vessels are visible in net-work form, zinc sulph. (gr. i—ʒi.) in one drop instillation, three times a day is good.

In protracted cases, with the papillæ in evidence, and a resemblance to granulations present, the use of ac. tannin gr. x, glycerinæ ʒi. three times a week with cotton applicator will level the surface and restore the lid surface to a normal condition.

When the lids are heavy and are with difficulty kept open, we can spray over them, while closed, a solution consisting of equal parts of spts. vin. rectf., spts. ammoni avom, spts. rosemar.

A person who has lost sleep and whose eyes present a reddened appearance in the morning can quickly find relief by the instillation of one drop of 1% solution of cocaine; three drops of a lotion of boric acid and aqua camp., and evaporation of the spirit mixture on the closed lids.

Those cases that arise from eye-strain must find the remedy in the relief of the

Directions for the Use of

BLENNOSTASINE.

Chronic Nasal Catarrh.—"Of the internal remedies we may mention Blennostasine—this remedy having a direct effect on the mucous membrane of the nose, and if given regularly, congestion in the mucous membrane disappears, or is constantly mitigated. The remedy is given in doses of three to five grains every three hours, and should be continued as long as the catarrhal condition persists. It exerts no unpleasant effect, and can be continued for an indefinite period."

Acute Coryza.—"In my experience I have found one grain, given half-hourly, to produce the best results in Acute Coryza. Blennostasine is particularly applicable to colds of singers and speakers, as the blenostatic effect is preferable to that of belladonna, and it certainly produces a tonic effect on the vocal mechanism."

Hay Fever.—"All hay fever patients who have taken Blennostasine have been promptly relieved, and though a recurrence of the symptoms next year may not be prevented, the usual attack may be aborted if the treatment is begun sufficiently early."

Influenza, LaGrippe, &c.—"Blennostasine is the most effective remedy n treating 'grippe' that I have ever tried, and is much to be preferred to the synthetical drugs."

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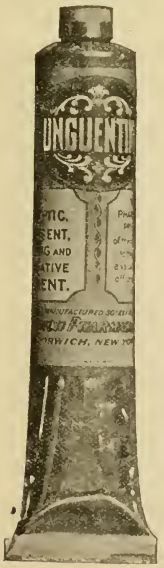

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115 Montague Street.

The Problem of Life.

By Wm. S. Stoakley, M. D., Millboro Springs, Virginia.

The acute thought expressed with basic force, and logically directed and concluded in this connection by Dr. Joseph Clements of Kansas City, Mo., in the November (1898) No. of The Charlotte Medical Journal, under the caption, "What is Life?" suggests the following remarks which are given simply for what they are worth, and with no intention of presuming to explain the unexplainable, neither presuming to cast the semblance of a ray of new light on the subject, the discussion of which in some of its phases, is as old as are the Zend and Sanscrit languages.

Only then, to say: When we carry our investigations of matter to its ultimate, it seems but fair to acknowledge the goal whereof it leads; and if we loose ourselves on the point of teneous materiality in vain search of the origin of life, and at the same time seeing *ab orbe condito*—through the "windows of the soul" an immateriality—auto-genesic, and manifested in matter through its power of existence in multitudinous forms under natural law, designed, each atom, and aggregation of atoms according to its kind, to be dominated and directed under the same natural law by mind as seen in man—a designer under this law; let us admit that Mr. Huxley was on the point of solving the problem of life when he touched the border-land of immateriality, where he only required "a little stronger lens to see the skillful finger tracing the delicate spinal cord into all its ramifications."

The delicate artistic arrangement of which Mr. Huxley speaks cannot be other than dependent on far distant and equally artistic touches, and what concern can these far distant elaborations have in this particular spinal matter apart from design and designer planning the *tout ensemble* of material creation?

If design is not seen in the unerring fashioning of the heterogeneous into the homogeneous and conversely; with perpetual temporal correspondent succession as to coexistences external, the chaotic result of the lack of it can be well imagined.

We have studied the cell with its nucleus and nucleolus and protecting wall for the origin of life, and fail to find it.

We seek the protoplasmic mass and discover force and motion.

If this ultimate force and motion is without super-material direction how does it happen that these powers when generated by man's ingenuity under natural law require mental direction in accomplishing certain purposes?

Matter is no less material because of its radiantcy.

Force and motion no less in need of direction by reason of ultimate subtilty.

We analize this protoplasma and discover the elementaries C. H. O. N., which, with their combinations and recombinations compose the world, and it swings amidst incalculable chemic activities, which Messrs. Huxley, Tyndall and Spencer agree, fail to account for bioplasmic activities, while Ferrier and Tyndall say that molecular activities cannot pass into mental activities.—Dr. C.—*ibid.*

It is admitted that "the ultimate principle of life, in the animal and vegetable worlds, in all their variety and multiplicity, is absolutely alike."—*ibid.*

If then, the material origin of life is not established after material tracings of such tenuity as Mr. Crooke and others have attained, we may reasonably conclude that: Notwithstanding all the elaborated concatenations of abstruse observation along this line, though indicative of profound erudition, we are without a material reason with which to rebut Byron's dramatic exposition† (to say nothing of the views of John, the "Jew of Palestine,") where he makes his characters say:

Aho. "Who shall shake these
Solid mountains, this firm earth,
And bid those clouds and waters take shapes
Distinct from that which we and all our sires
Have seen them wear on their eternal way?
Who shall do this?

Japh. He, whose one word produced them.

Aho. Who heard that word?

Japh. The Universe which leaped to life before it."

†Heaven and Earth a Mystery.

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A good appearance, neatness of dress, an a certain sedateness of speech are also helpful. By this is meant the ability to say "an undisputed thing, in such a solemn way." These directions, systematically followed, are almost sure to succeed. A doctor is more apt to call a consultant who leaves him feeling satisfied.

But one is quite certain to fail in carrying out these rules, until he has ceased to be a therapeutist. Any remnants of the old idea of curing people must have been outgrown. *Laisser-faire* is the materia medica absolutely necessary to the success of the consultant on the lines laid down.

Nor is this therapeutic nihilism difficult to obtain. German literature, especially of two or three decades ago, is very helpful. Experience in the fads of medicine that one has seen arise and fade, the follies of all the irregulars, the necessity of contending with the exaggerated claims of new remedies all assist in acquiring the esoteric culture that one medicament is as good as another and that all are alike useless. Casual remarks volunteered by successful, old men are also of assistance. One tells us that if he finds empty any vial in his pocket-case which he intends to use, he gives the bottle next to it. Another that he has made a good many dollars out of five cents worth of sugar of milk. There is no more expressive way of representing the status of a practitioner, than to say that he has great faith in medicines.

Time and experience, a thorough course in pathology, and a careful attendance upon medical societies where no plan of treatment is held to be worthy of discussion until supported by a table of statistics, all these are beneficial in forming a frame of medical mind that is almost impregnable. A man of such culture can give valid reasons against any enthusiastic procedure. Almost by his presence any mention of trivial details of the sick room or year-book recommendations dies on the lips unuttered.

One or two objections only arise while presenting this general plan of attaining prosperity as a consulting physician. These, however, are so outside the question of individual success that they are only mentioned incidentally.

One is that a conviction once generally held by the profession is in great danger of filtering out to the laity. Some of them are obstinate in wanting to be cured instead of being satisfied with a perfectly good reason why they cannot be. Then, too, there is some danger in this practical age that if the impression should become general that consultations were primarily to conserve the reputations of the consultants they would become less general. In this way, indeed, a financial injury to the individual might indirectly occur.

The other criticism is almost sentimental. It is that after this culture has been attained one of his own children might be taken dangerously ill. Almost surely a sense of dissatisfaction would arise temporarily. Demonstrated, scientific medicine is indisputable and impregnable so far as it extends, but how painfully limited it is! Would he not desire to call in some of the possibilities that are not lying outside his cultivated field? Are there not beyond certainties, possibilities and probabilities?

If his child should recover after some nights vigil he may later ascribe it to *vis medicatrix naturæ*, but at the same time some strange ideas will float through his brain; he will wonder whether the physician who is born, not made, may not steer his ship clear of shallows which are not yet chartered, may not gain for her a favoring breeze of which his instruments did not tell him, might not pull her from the jaws of death by some rare expedient not yet described.

CREASOTE VS. CARBOLIC ACID.

The difference between these two common drugs may be patent to many of the readers of this Journal. But we so often see results looked for that are never received, that it becomes us not to neglect to study minutely the materia medica and ther-

apeutic action of those drugs we use almost daily as we deal out medicine to suffering humanity, that place their health in our care.

Creasote, properly speaking, is obtained from wood, usually beech wood, but in writing a prescription for creasote we often have (German creasote) dispensed to our patients, and when we look up our materia medica we find that we are giving carbolic acid, for (German creasote) is nothing more than carbolic acid.

Creasote is a valuable stimulant and constructive. It can be given in drachm doses where the stomach is not irritable, and most any stomach will stand ten to fifteen minims three times a day.

In its use we find the most happy results may be obtained in slow wasting diseases, especially tuberculosis, that sends such a multitude to the grave yearly.

By beginning with ten minims of creasote and increase gradually to all the patient will bear, we improve the appetite, lessen the cough and expectoration, and sometimes as it were, cure a tuberculous subject that was marching steadily downward.

The uses of carbolic acid are many, so far as external uses are concerned, and too much cannot be said in its praise as a local antiseptic; pure and in its various combinations may be found a valuable assistant to nature's effort at reparation.

But when we look to its uses as an internal medicament they are indeed limited, and the dose must necessarily be small, for one such as we give of creasote would bring our patient near unto death, and in many cases cause final dissolution before we could be summoned to tell the weary mortal "good-bye."

The physician should be careful to specify *wood creasote* for internal use, and the druggist should be familiar with the two drugs so as not to dispense *German creasote* when the *wood creasote* is written, for he might send some poor sufferer to his long home untimely.

IS THERE SOMETHING BEYOND SCIENCE?

It may be ignorance which continues to fight disease which is hopeless; it may be worse—a desire for the fee; it might be that courage which never gives up the ship, even if the captain has lost hope, what boots it to plunge all into the abyss of despair? Who knows in what very irregular fashion others might not get ashore? Wilt thou love thy neighbor, tell him not, 'there is no help for thee,' but only say, 'I cannot do it, I do not understand it,' says Paracelsus.

If there are powers and possibilities which remain for the science of future generations to explore how are we to get any benefit from them for sick mortals now? Are we to discard our boasted science and again practice the occult? How shall we gain this clearness of vision that does not depend upon induction? How can one obtain intuition if not so gifted by nature?

In his own involved, confused, Brown-ingesque style the author attempts to explain it in this manner: "A man, who, by abstraction from all sensuous influences, and by childlike submission to the will of God, has made himself partaker of the heavenly intelligence, becomes possessed of the philosopher's stone; he is never at a loss; all creatures on earth and powers in heaven are submissive to him; he can cure all diseases." This is the neo-Platonic method of becoming a seer.

It is very difficult to adapt our modern thought and modern language to this that Paracelsus felt to be the highest truth that he could impart. The majority of us do not try. They remark that many diseased conditions are self-limiting. That because mercury was given in a case, or that somebody said the Lord's prayer, proves nothing—that the case got well of itself. All of which is sagely true and should be borne in mind. Cases of diphtheria get well of themselves, which did not preclude the strange idea whether there be not virtue in introducing horses' blood into the patient's circulation. Tyndall pleads with his scientific hearers to cherish their imagination amid their cold logical studies and demonstrations. How else shall future progress be made if not by hypotheses and theories reaching beyond known facts?

To the physician whose business it is to grapple with diseases it is even allowable to act on the guesses of the scientific imagination in emergencies where demonstration is unavailable. If Braddock had survived his defeat by the Indians, he might have proven that his conduct of the army was according to all precedent, but a victory which should have made a precedent would have been more useful to the world.

HEREDITY OR ASSOCIATION—WHICH?

There has been some contention among able men whether heredity or association exerts the greater influence on human character. From the standpoint of our observation, we have long since arrived at the conclusion that association is calculated to produce greater effects in a moral or immoral point of view, than that of heredity. For instance you take a certain number of

boys whose parents have taken great pains in their raising and moral teaching, and allow them to associate with a lot of street hoodlums, and they will soon be found about as bad as their companions. Then, again, if we take a number of young men who have been raised to observe moral and religious teaching by their country parents, and allowed to go to a city to act in the capacity of clerks or otherwise, and happen to form associates of a lot of wild, immoral young men, nine cases out of ten, they will be tempted to participate in the evil practices of their immoral companions.

These considerations illustrate the position, how essential it is that all parents should be careful to inculcate moral principles in the raising of their children so as to diminish the number of bad boys as much as possible. But this is an uphill business in cities where there are so many immoral parents.

Perhaps Col. Hogeland's theory is correct that the ringing of the curfew bell would promote moral development, by keeping the youngsters off the street at night.

ANIMAL EXTRACTS.

Fifteen grains of Liebig's extract of beef, the commercial product, was administered hypodermically to a rabbit weighing four pounds. The pulse became more frequent, with rapid respiration. In two hours symptoms of paralysis of the extremities developed, and the animal was unable to stand. The paralysis increased and death finally occurred in twelve hours with paralysis of respiration.

A second rabbit who received sixty grains died in thirty minutes. The commercially prepared dry powder, of the thyroid gland, caused symptoms of Graves' disease: increased pulse, exophthalmos, and some temperature. In large doses, death occurred. The same experience was had with the dry powdered suprarenal capsule.

The above facts should make us more careful in prescribing prepared foods for the sick, because they contain toxines which are capable of causing death. The writer administered hypodermically five minims of a solution of commercial meat extract to a healthy man weighing 168 pounds. After one hour the temperature rose to 104 deg., with pain in the back, muscular weakness, and some cloudiness of the intellect. Four ounces of a *fresh* extract was given in the same way to a woman weighing 115 pounds. No disagreeable symptoms followed, except that due to the swelling produced by the fluid beneath the skin at the place where the hypodermic injection was made. In half an hour no soreness was felt. While 15 grains of the commercial extract of beef will kill a rabbit, 60 grains of a *fresh* extract has caused no symptoms.

When we come to prescribe animal extracts as medicines, we must use greater caution than in their use for food. In diseases of the thyroid, or in the absence of the thyroid, the gland has been prescribed. It has been proved that thyroidless dogs are benefited by taking sheep's thyroids, although death always occurs in three weeks or less. Impure thyroids, commercially prepared, produce the symptoms of exophthalmic goitre in dogs, rabbits and monkeys. Cunningham (Journal Exp. Med., March, 1898) has written a valuable paper on Experimental Thyroidism, in which he proved that fresh thyroids are not injurious and produce no symptoms. The extract of the suprarenal capsule has decided physiological properties. It elevates the blood pressure enormously. Oliver and Schäfer (Journal Phys., 1895) showed experimentally that it was the most valuable heart tonic known.

THE INSPECTION OF THE CORNEA IN OPHTHALMIA NEONATORUM.

It is unfortunate that well informed physicians in caring for cases of ophthalmia neonatorum do sometimes neglect the rule which requires a daily thorough examination of the cornea. Such examination is important not only in the interest of the sight of the eye, but in the interest of the physician himself. By it he discovers the first encroachments of a necrotic process which early and vigorous measures may arrest. At least he is able to give timely warning of disaster and thus protect his reputation. A thorough examination is most important of all at the first visit, if the case has progressed for several days before coming under observation, for already the eye may be irreparably damaged. If this fact is not at once announced, the doctor is very naturally blamed for final results.

The most frequent causes of his neglect of this duty are a fear that the means he employs will be held responsible for any damage to sight which the disease may cause or may have caused, the absence of a suitable retractor, and the fact that as he attempts to draw the lids apart he is baffled by eversion of the lids and spasm of the orbicularis. But in this disease, if ever in any, timidity must give place to boldness. Moreover, the difficulties are only apparent and are encountered only by the inexperienced.

For exposing the cornea in these cases and without instruments the following

method has been described before, but is so simple, excellent and safe, that we feel justified in again calling attention to it. With the head of the child held firmly in the usual position between his knees the surgeon places the tip of the fore finger of one hand on the upper eye lid in such a way that the end of the nail rests on the skin of the very edge of the lid. Then by so pressing the lid backward and upward that its edge keeps continuously in contact with the eye ball he will be surprised how easily it is pushed out of the way. Now by pulling down the lower lid with a finger of the other hand he has the cornea completely uncovered. Thus is avoided the spasm and the eversion of the upper lid with the least show of harshness. Even the greatest amount of swelling does not interfere with a thorough and deliberate inspection.

ABDOMINAL PAINS.

It is not our intention to enter into an exhaustive article on this important subject, still it is one which should be recognized as worthy of careful attention, for often it is nature's voice telling plainly that something is wrong.

The physician is called in these cases for two purposes, to relieve, and to cure the afflicted one; his duty is not simply to choke this voice of suffering nature with an opiate, but to translate it, so as to ascertain just what it is trying to tell; it may be only complaining of an attempt to overwork the stomach, by filling it full of undigestible food; it may mean that the patient has an unstable nervous system, and is suffering from hysterical gastralgia; it may in fact mean so many things that it is necessary to make an elaborate examination in order to discover just what it does mean; many a physician has in cases of gastralgia in women in the latter part of pregnancy given opiate to relieve the pain which he attributes to some error of diet, or lack of proper care and gone home contented a half hour later, leaving the patient resting comfortably, only to be called again in a few hours to find the woman in convulsions. What does this mean? Simply that he has carelessly neglected to heed one of the most common warnings that is given, that puerperal convulsions are close at hand.

How often in children and young adults have abdominal pains more or less severe been simply attributed to some disorder of the stomach or intestines and been treated for months, with various pepsin mixtures, restricted diet and laxatives, with no better result than that, sometimes the patients are better, and then they are worse. After a longer or shorter time they probably, to satisfy parents or friends, and because the doctor does not know what else to do, receive treatment for worms with no better result. Something may at this time attract attention to the patient's back, where the physician may to his astonishment and chagrin find serious inflammatory disease of the vertebrae. After such an experience we should learn that it is well to examine the back of a patient who has a history of recurring abdominal pains and we will be suprised to find what a large per cent. of them have disease of the vertebrae.

THE TREATMENT OF STRABISMUS.

A study of recent literature discloses a renewal of interest in the theory and cure of strabismus. When we read the discussions of such eminent observers as Hansen, Grut, Wahlfors and Schweiger, as to whether the real essence of squint rests on innervation or an anatomical basis we are reminded that there is much to learn yet regarding the anatomy, physiology and pathology of the ocular muscles, and the relationship of accommodation to convergence.

This discussion has been extended also to the relative merits of operations. Landolt and DeWecker especially emphasize the importance of advancement of the weaker instead of tenotomy of the stronger muscle, in all cases. They are not alone in this position. Many workers in this line have invented special methods of advancement, most of which are good. But it remains true that as far as our knowledge goes at present, tenotomy will be done in a large class of cases.

Neither have the dioptic and orthopedic measures failed to receive their due share of attention. Most notable is the recent monograph of Priestly Smith, who points out the means of *educating* squinting children into the habit of ocular equilibrium.

All these things have helped to place the subject of strabismus in an advanced position over what it was twenty years ago. It need not much surprise us should the laity still think that the treatment of squint involves a little cutting only to get the eyes straight. But no physician is longer excusable for the same notion. The correction of deformity, gratifying as it is, is but an incident. The higher aim is the restoration of comfortable binocular fixation. This demands the highest faculties of the surgeon, sometimes a tenotomy, sometimes an advancement, occasionally both; but always a profound study of all the ocular conditions and a rational application of such

optical facts and principles as will insure the desired results. An operation should never be viewed otherwise than as *part* of the treatment, which will, as a rule, extend over a period of several months or years. It is needless to add, these remarks apply only to cases of concomitant squint with vision possible to each eye.

THE ABUSE OF MEDICAL CHARITY.

Fifty years ago the city of London found that one-third of its population received free medical treatment at its numerous hospitals and dispensaries. Were they paupers? If not paupers would the liberality of the medical profession tend to pauperize the dispensary patients? These and other questions produced such a stir in the community that a royal committee was appointed by the government to investigate. The committee found a bad condition of affairs, sent in its report with suggestions of relief and that was the end of it. The abuse still continues. And now the city of New York is having a similar experience with its committees. The various societies have discussed the abuse of medical charity and appointed committees to confer with other societies to find a remedy for the evil. Two years ago the remedy suggested resulted only in an acrimonious discussion between hospital phpsicians and those not holding an appointment. What can be done? The evil in London and New York exists in Berlin, where a physician's fee is as low as twenty pfennig (five cents). And all over the United States the public are ready to receive free medical treatment. Should we allow it? Should we while restoring the body to health allow the mind of our patient to be weakened by the influence of free medical treatment? If it is injurious to give money where it is not needed, it is worse to give free medical treatment to the general public who are not beggars at first.

I well remember the scorn with which a medical missionary from Asia spoke of the medical charity in New York. "Why should your people be treated for nothing? Are they without money? No. They live in warm houses, wear good clothes—no rags among them. All have meat daily. I see none suffering from exposure, or the want of food. Look at their fat faces. We do not see people so well off at the hospitals in the East. They come in rags, wearing no jewels. Their faces are pinched with hunger. They are poor, but not paupers. They are wretched, but not debased. Honor, truth and a nobility of mind are written on their faces, and we respect them. Medical charity would be their ruin. They all pay something, by their work or in money. The rulers of those people will not allow them to be pauperized."

THE PASSING OF THE EXPECTORANT.

The effect of the study of pathology upon treatment is no where more evident than in our treatment of acute bronchitis now as compared with that of a few years ago. The knowledge that a variety of agents, mostly of bacterial origin, are its causative factors; that the cause is sometimes to be found in the stomach, or again in the kidney, and so on, leads us to look askance on our former treatment, with nauseating mixtures, under the name of expectorants. A well known clinician and teacher recently said, "there are no expectorants," and in a measure this is true, if we think of the class to which ipecac, senega and squills belong. Indeed the major part of the value of the ammonia compounds is undoubtedly due to their local effect on the stomach.

Now we treat the cause and symptoms, formerly we attacked the cough as a distinct disease. At present an occasional calomel purge, soothing inhalations, codeine or its relatives with tonics, in the early period, and perhaps potassium iodid later on constitute the general plan of treatment as pursued in the large cities to-day. Certainly these attacks do not seem to last quite as long as they did when we aggravated the condition by an additional gastritis due to the fermenting syrup and the irritating substances combined with it.

HIGH DEGREES OF MYOPIA.

By this term we usually mean cases of twelve or fifteen dioptres or more of near sightedness. A person with such a degree of myopia is certainly afflicted with a great misfortune. Without glasses he is practically blind. With glasses he often obtains at best but poor and restricted vision.

It is no wonder then that the high myope has been in recent years, introduced to the surgeon's knife. The surgical procedure adopted for his relief is the removal of the crystaline lens. If the aphasic eye requires a convex glass of 14.D. to 15.D. for distinct vision, an eye not aphasic, requiring a concave glass of 14.D. to 15.D., ought to have normal vision without glasses after removal of its crystaline lens. In practice it is often found that a myope who before operation required a—20.D. or—25.D. glass to see with, will, after the operation see without any glass. Percival (Arch. Ophth., Vol. xxvi, No. 1) points out the reasons for this. We cannot discuss them here. It certainly

is true that the vision without glasses or with weak glasses is frequently much better after this operation than with strong glasses before. It is also claimed that accommodation being no longer exercised, the progressiveness of the myopia is checked.

There are some dangers attached to the operation. Myopia predisposes to retinal detachment, which the operation alone sometimes causes. Myopic eyes are usually more or less diseased, hence the risks of operation would materially seem greater. Though many successful cases, with brilliant results, have been reported by eminent operators in this country, as well as abroad, it would be well for any one who contemplates performing this operation to remember the remarks of Dr. H. Knapp: "I confess not to be very partial to removing a non-cataractous lens. The proper value of this treatment of myopia will be recognized when the period of its boom is passed."

NASAL TREATMENT AS A CAUSE OF EAR DISEASE.

Do not spray the nose. Do not use the douche. Be careful how you operate en the nose. Why? Because such procedures cause inflammations of the ear with tinnitus and deafness. Inquiry among deaf people proves this to be true. Ninety per cent. snuff water up the nose to relieve nasal occlusion, or use the spray or douche. Treatment of the nose is the most common cause of deafness. A severe cauterization of the inferior turbinated was followed by a mastoid abscess in twelve hours, which required operation. Packing the nose with styptic cotton has caused acute, severe otitis.

The danger, however, lies with the more insidious cases, those in which deafness is chronic from the beginning. Pain is absent. The patient feels no ill effect at first. Weeks and months may pass by before the patient begins to notice that his hearing is bad when he has a "cold." When he recovers from the cold his hearing may improve. But after each succeeding attack the deafness does not follow. Such patients go to their family physician who sprays the nose for the "cold;" the patient recovers from the cold and believes the nasal treatment was a benefit to the hearing. The family physician is deceived and believes nasal treatment is beneficial. Not every specialist on the ear knows that nasal sprays or douches are injurious.

It is almost impossible to convince patients that the nasal douche, which makes the nose feel so good can possibly harm the ear. And I know patients who use the douche, although convinced it makes them deaf.

How does nasal treatment injure the ear? Through the nervous system. A nasal douche is stimulating. This is followed by a depression which causes a congestion of the ear. Watch the drum membrane before and after a nasal spray or douche, and note the congestion of the malleus handle and folds produced by the nasal treatment. This congestion may be so great that rupture of some of the smaller vessels occur and minute hemorrhages can be seen.

Do not be deceived by the douche. It is tricky. Its ill effects are not always evident at the time while its immediate benefit is unquestioned. Let every physician who has the best interests of his patients at heart avoid the spray or the douche and treat the nose with care, watching the ear all the time that no harm may result.

MODERN SURGERY AND THE PERITONEUM.

Probably nothing in very recent years has done so much to lessen the dangers of laparotomy and to increase the number of its good results as the suggestion of Wiggin, made some six years since, that the peritoneal cavity be filled with normal salt solution, and that this fluid be allowed to remain after closure of the section. In the days preceding the introduction of this method, the so-called toilet of the peritoneum was religiously performed. Every drop of fluid was carefully mopped out. In doing this many unavoidable abrasions of the serous membrane were produced. This not only afforded an opportunity for infection but also fruitful areas for inflammatory exudate, and consequent adhesions. Inasmuch as the abdominal pain, of which so many patients complain so bitterly before abdominal section, is caused for the most part by peritoneal adhesions rather than the disease itself—scarcely any relief can be expected from the removal of the diseased structures if new adhesions be allowed to form. Often, in such cases, the last condition is infinitely worse than the first.

Intestinal obstruction, due to adhesions, was certainly much more frequent in former days than now. The rationale of its employment (as pointed out by Wiggin) is very clear. The salt solution keeps the abraded surfaces apart long enough to prevent the formation of adhesions. Furthermore it dilutes any poisonous material that may escape our notice, and, of all the means of preventing shock it is one of the best. After a varying period of from one to six hours, it is taken up by the peritoneal lymphatics, stimulating thereby

the absorption of any blood or foreign material that may accidentally be left. The salt solution so absorbed acts as a food and a stimulant to the system in general, alleviating to a marked degree the thirst and vomiting due to anæsthesia, preventing the suppression of urine, increasing diaphoresis, and, in general promoting the comfort of the patient. This is only another evidence of the fact that American surgeons are the leaders of surgical progress.

FLUCTUATIONS IN THE DISEASE CURVE.

In the clinical observation of disease a striking fact, often brought to our notice, is that we are frequently called upon to treat a series of affections of a similar nature, yet not generally classed as belonging to the epidemic diseases. At other times such affections may be extremely rare. In this connection may be mentioned the fact that in one of the largest venereal hospitals in this country it is a common condition to find that for a period of several months all venereal sores will be of a syphilitic nature, again the pendulum will swing to the opposite side and only chancroids are to be found. A similar condition of affairs occurred in Paris shortly after Diday had first made clear the differential diagnosis between chancre and chancroid. When he sought cases to prove his assertion that they were separate diseases a chancroid could not be found, and this fact nearly served to disprove his conclusions.

Correlative to the foregoing is the fact that in some seasons all of our cases of serious disease, such as typhoid fever, diphtheria, or pneumonia, get well, no matter how treated; and at other times most of them die despite all treatment. These two facts have a mutual relationship, in that the causative factor in each condition is a micro-organism. Experience has taught us that climatic conditions, existing in the preceding season have something to do with these phenomena. Especially is this so in regard to the growth of the typhoid bacillus, and the *plasmodium malariæ*. We know that the virulence of most micro-organisms can be greatly attenuated in the laboratory, by the use of heat. Undoubtedly the same thing occurs in nature. Fluctuations in atmospheric pressure, the increased amount of oxygen in the air during prevailing north winds, the frequency of thunder storms and certain other climatic conditions, not yet well understood, seem to be potent factors in determining the virulence of many of these micro-organisms.

Furthermore, recent experiments show that the X rays have a decided restraining influence upon bacterial and cellular life. Without doubt vibrations corresponding to the X rays are to be found in nature, and results similar to those occurring in the laboratory may be confidently expected to take place. That there are other wave phenomena analogous to the X rays, with a different vibrating coefficient is very probable, and these likewise may be shown to have some effect on the growth of organisms, and perhaps on the resistance of the cells themselves. Who can say that the hygienists of the 20th Century may not discard antiseptics entirely?

THE SYMPATHETIC NERVOUS SYSTEM

While the cerebro-spinal nervous system has been the object of most careful study and experience, the sympathetic has been almost neglected. Those who have been specially interested in the study of the nervous system have long felt the want of a more exact knowledge of this important part; and it is with pleasure that they note the work of Onuf and Collins of New York, who started their experiments for the purpose of discovering the sympathetic centres in the brain and cord. Their experiments have not only shed much new light upon this subject but have also developed some very interesting physiological facts; such as, the removal of the cervical ganglion causing digestive disturbances, consisting of diarrhoea and putrefaction of the fæces, as also did the removal of the thoracic and semilunar ganglia. The removal of the thoracic sympathetics caused the appearance of a large amount of sugar in the urine, which was still present four months after operation. We simply call attention to these interesting facts in order to show how important this work will be to the profession; it will be hoped that these gentlemen have simply opened the door through which others will enter and carry on this work, until we are perfectly familiar with all the functions of the whole nervous system, then we will probably do less groping in the dark, and many things that are at present unexplainable will be perfectly clear to us.

IS SEXUAL PERVERSION INCREASING?

The undue prominence given to the deeds of sexual perverts by the daily press in some of our large cities would, at first sight appear to strengthen the statements of certain pessimistic philosophers that such vices are on the increase among our American people. The very opposite is more probably true. In Europe, where these vices are common they attract little atten-

tion, but in this country the universal disgust excited by such deeds, together with their relative rarity combine to make the matter more noticeable. Without doubt there is considerable taint of this kind abroad in the land, but it is largely confined to foreigners, chiefly among the Italians. Whether in this case it is due to an inherited vice of constitution or to their crowded manner of living is a question. It is none the less true that a considerable number of the rectal cases coming to a large dispensary are from among this race, due to one form of sexual perversion, *i. e.* pederasty.

Of course in coming to any general conclusion as to the prevalence of these vices, we must exclude the insane, the vagaries of whom often take on the form of sexual perversion. We may also assume that slight departures from the normal sexual act are sufficiently common in otherwise untainted individuals to be considered physiological. Such conditions are common the world over and have no significance. However, of the graver forms of perversion such as are commonly met with in Europe, we seldom see an example.

BOOK REVIEWS.

Human Anatomy. A complete Systematic Treatise by various authors, including a Special Section on Surgery and Topographical Anatomy. Edited by Henry Morris, M. A., and M. B., London. Senior Surgeon to the Middlesex Hospital; Examiner in Surgery in the University of London; Member of the Council, and Chairman of the Court of Examiners of the Royal College of Surgeons of England; Honorary Member of the Medical Society of the County of New York. Illustrated by seven hundred and ninety wood-cuts, the greater part of which are original and made expressly for this work by special artists; over two hundred printed in colors. Second edition, revised and enlarged. Published by P. Blakiston's Son & Co. Philadelphia. $6.00, cloth.

This is the best and most complete anatomy that has been published in many years. It gives a complete and systematic description of every part and organ of the human body so far as studied in the dissecting room. The author has not deemed it wise to consider Histology and development, except the mode and dates of development of the bones, and a few other instances, thinking these more properly belonged to books on Physiology. The different subjects have been written by different authors who are known to have devoted special attention to the subjects allotted to them. The illustrations are of the highest order, and for the most part entirely original. The value of the colored plates as compared to the old black ones will be apparent to every student of anatomy. In the illustrations of the bones, the origin of the muscles are indicated by red lines, the insertions by blue lines, and the attachment of ligaments by dotted black lines. A special feature of the book is the method of describing the illustrations. It consists in printing the descriptions in different type at the end of the pointers. Thus it will be found that muscles, fasciæ, and ligaments are in one kind of type; arteries, veins, and lymphatics in another; bones in a third, and nerve structure in a fourth. The arrangement of the work is such that a student can readily turn to what he wants without having to look through a whole section as is the case with many anatomies.

The publishers have done their part well. The work is printed in large clear type on fine paper, and the binding constructed so as to allow the book to lie open without the use of weights. Taking everything into consideration it is undoubtedly the best anatomy published in the English language.

A Text-Book of Obstetrics. By Barton Cook Hirst, M. D., Professor of Obstetrics in the University of Pennsylvania, with 653 Illustrations. Philadelphia: W. B. Saunders, 925 Walnut Street. 1898. Price, Cloth $5.00 net, Sheep or Half Morocco $6.00 net.

This great work is considered under seven main divisions: I. Pregnancy; II. The Physiology and Management of Labor and the Puerperium; III. The Mechanism of Labor; IV. The Pathology of Labor; V. The Pathology of the Puerperium; VI. Obstetric Operations; VII. The New Born Infant.

We have many excellent text-books on Obstetrics, but this one possesses such a high grade of excellence that it will at once merit and secure the attention of the profession, and being a pre-eminently practical one, will not only be valuable whether in the hands of a tyro in obstetrics, or in those of a veteran practitioner, who wishes to ascertain the latest and best in this line of work. The author states in the preface that this work is the outcome of twelve years' work devoted entirely to obstetrics and gynecology. In this work are found many beautiful and excellent illustrations, which are indispensable in a work on obstetrics, and the majority of which are from original photographs and drawings.

We note with pleasure the masterly manner in which puerperal sepsis is treated.

The subject of pathology, physiology and diseases of the new born occupy thirty pages of the volume. Schultze's method, with month-to-month insufflation, is considered the best method of treating asphyxia neonatorum. The work ably serves the purpose for which it was written, "to serve as a guide to undergraduate students and to physicians in active practice." The work is a splendid one. It is clear, lucid and concise, well printed and bound, and has a good index.

A Primer of Psychology and Mental Disease, for Use in Training Schools for Attendants and Nurses, and in Medical Classes. By C. B. Burr, M. D. Medical Director of Oak Grove Hospital for Nervous and Mental Diseases, Flint, Mich.; Formerly Medical Superintendent of the Eastern Michigan Asylum, Member of the American Medico-Psychological Association, etc. Second Edition, Thoroughly Revised. 5¼ x 7¾ inches. Pages ix–116. Extra Cloth $1.00, net. The F. A. Davis Co., Publishers, 1914–16 Cherry street, Philadelphia; 117 West Forty-second St., New York City; 9 Lakeside Building, 218–220 S. Clark St., Chicago, Ill.

The first twenty-eight pages of this volume is devoted to Psychologyy and is of value to the student or to any one especially interested in those subjects pertaining to the mind. The latter portion of the work is devoted to Management, and cases of insanity and is very practical. The last chapter is on what to do and what to avoid in caring for the insane. The little work is very practical indeed.

The Sexual Instinct, Its Use and Dangers as Affecting Heredity and Morals. Essentials to the Welfare of the Individual and the Future of the Race. By James Foster Scott, B. A., (Yale University), M. D., C. M. (Edinburgh University). Late Obstetrician to Columbia Hospital for Women, and Lying-in-Asylum, Washington, D. C.; Late Vice-President of the Medical Association of the District of Columbia, Etc., Etc. E. B. Treat & Co., New York.

The design of this work is to furnish the non-professional man with a sufficiently thorough knowledge of matters pertaining to the sexual sphere—knowledge which he cannot afford to be without. If this book was read by every citizen in the country the outcome for good would be marvelous. Literature bearing on such subjects has been scant and of an inferior kind. In this work the author discusses the importance of the subject, the physiology of sexual life, the consequences of impurity, etc. Sections on gonorrhœa, onanism, syphilis, are very good. The work contains 436 pages, and the price is $2.00.

Medical News Pocket Formulary for 1899. By E. Quin Thornton, M. D., Demonstrator of Therapeutics, Pharmacy, and Materia Medica in the Jefferson Medical College, Philadelphia. Lea Brothers & Co., Philadelphia and New York, 1899.

The author states that in preparing this little volume there has been no intention that it should replace individual thought on the part of the practitioner, whose diagnosis of each case must govern the character, quantity and combination of the remedies selected. That there is a broad and legitimate field of usefulness for works of this character is self-evident, for even the best informed practitioner may at times overlook an appropriate drug, and the young physician will perform his duty better, both to his patient and himself, if he has at hand the collective experience of the profession. The arrangement of the text has been planned to condense to the greatest convenience. Diseases are arranged alphabetically, and under each are given efficacious prescriptions for simple cases as well as for the various stages and complications.

The volume contains a table of doses, poisons and their antidotes, important incompatibles, etc. By close application the volume will be of great help.

The Phonendoscope and Its Practical Application, with Thirty-seven Illustrations, with Translations of Special Articles by Felix Regnault, M. D., M. Anaslasiades, M. D. Translated by A. Geo. Baker, A. M., M. D. Philadelphia: Geo. P. Pilling & Son. 1898.

This book is a highly interesting work on Phonendoscopy, and should be in the library of every progessive physician. The most important and useful application of the Phonendoscope consists in making the artificially produced sounds audible for the purpose of ascertaining the formation and outline of the different parts of the body. This work is beautifully illustrated from plates brought from abroad and is well bound in cloth.

A Compend on Obstetrics. By Henry G. Landis, A. M., M. D. Revised and Edited by William H Wills, M. D. Sixth Edition. Philadelphia: P. Blakiston's Sons & Co., 1012 Walnut St. 1898.

This is the sixth edition of this compend on obstetrics thus showing the esteem in which it has been held by the student and practitioner of medicine. As far as possible the original concise style of instruction

adopted by the author remains the same. There have been some omissions and some additions necessary. The following subjects have been enlarged in this edition.

Diseases of the Skin. An Outline of the Principles and Practice of Dermatology. By Malcolm Morris, M. D. New and Revised Edition. Philadelphia: Lea Brothers & Co.

This is a very useful and valuable book on the diseases of the skin. It contains 588 pages and is divided into twenty-five chapters, with a good index. All diseases peculiar to the skin are thoroughly and elaborately considered in these pages. The author, as a writer and teacher upon subjects pertaining to the skin, is well known throughout our country and abroad, and any thing from his pen carries with it authority. The work contains many very fine illustrations, many of which are new, which will increase the usefulness of the work. The book is convenient in size and is altogether a book greatly to be desired. It is printed neatly and prettily bound.

Diseases and Their Cure. Fifty Years Experience. By A. H. Crondace, M. D. Published by the Author, Quincy, Ill.

The first two hundred and twelve pages of this work is devoted to Diseases and Their Cure. Under this head is given a simple general outline of the common diseases with their appropriate treatment. The diseases treated are those that occur daily in the household. Each disease is described very clearly and the treatment prescribed is most satisfactory.

Twelve pages of the work is devoted to the Twelve Tissue Remedies. The remaining portion is devoted to the application of Biochemic Remedies. The book is well printed and neatly bound.

Saunders Medical Formulary with an Appendix. By William M. Powell, M. D. Fifth edition. Philadelphia: W. B. Saunders, 925 Walnut St. 1899.

This volume contains the favorite prescriptions of the most eminent physicians. It is handy and convenient, and very valuable to beginners. It is covered in leather and can be carried in the pocket.

Coca and its Therapeutic Application. By Angelo Mariani, with Illustrations. Third Edition. New York. J. N. Javas, 52, West Fifteenth Street.

This pamphlet gives a description of the Coca plant, its physiological and therapeutic uses.

A Pilgrimage: or the Sunshine and Shadow of the Physician. By Wm. Lane Lowder, B. S., M. D.

This is a most interesting little book. It gives the ups and downs of a physician's life. It is neatly bound.

LITERARY NOTES.

The American Monthly Review of Reviews begins its new volume with a strong issue and a largely increased circulation. The two important and timely subjects of American diplomacy and territorial expansion figure prominently in the January number. The editor reviews the historic year 1898 from the international view-point and discusses pending national problems; Mr. Henry Macfarland, the Washington correspondent, contributes a study, based on intimate knowledge, of the diplomacy of the war, and Prof. Harry Pratt Judson, of the University of Chicago, writes an exhaustive paper on "Our Federal Constitution and the Government of Tropical Territories." Mr. W. T. Stead gives an interesting estimate of the young Russian Czar; Miss Laura Carroll Dennis describes the career and work of the rising American sculptor, George Grey Barnard, and a sketch of the late General Garcia, the Cuban patriot, is contributed by Mr. George Reno. Margherita Arlina Hamm gives a succinct account of the Red Cross movement and the work of that organization in the late war.

To have the men who have demonstrated their organizing ability by great business successes tell their secrets of organization, is the object of the editor of The Cosmopolitan. That he is succeeding, is proved in the January issue by the article from Chas. R. Flint, who is regarded in New York as one of the three or four ablest organizers in America. He is president of the Rubber Trust and the head of the great mercantile house of Flint, Eddy & Co., which has its ramifications in almost every port of the world. Mr. Flint tells very openly what makes for success in the organization of business. His article may be read with interest by the Rockefellers, the Armours, and the Wanamakers, as well as by the humblest clerk seeking to fatham the secret of business success.

In the same line is an article, also in the January Cosmopolitan, telling how Mr. Platt organized and conducted the campaign for the election of Roosevelt. It is by a gentleman who was actively engaged at the Republican headquarters during the cam-

paign, and who gives a vivid picture of the perfection to which political organization has been carried in New York State by the most astute of managers. The wary old Senator who has been a lifetime in politics and the youngest political aspirant will alike find food for reflection in Mr. Blythe's article.

Lippincott's Magazine for January, 1899.—The complete novel in the January issue of Lippincott's is "The Mystery of Mr. Cain," by Miss Lafayette McLaws, daughter of the Confederate general of that name. The scene is in Georgia, and the plot is so uncommon that to reveal it would be unfair to the reader.

"The Other Mr. Smith" is a society story—but of the unconventional kind—by Ellen Douglas Deland.

"John Rutland's Christmas," by Henry A. Parker, is a tale of practical philanthropy, personally administered.

In "Black Feather's Throw" Joseph A. Altsheler deals again with the times when Indians tortured their white prisoners and burned them at the stake.

The history of an ill-fated empress—"Poor Carlotta," wife of Maximilian of Mexico—is told by Lucy C. Lillie.

Charles Cotesworth Pinckney revives "The Great Debate of 1833," in which Calhoun bore a prominent part and was opposed by Webster.

Dr. Felix L. Oswald offers "An International Study on Liberty," bringing out the widely differing significations which the word is made to bear, or aspects of the thing that are insisted on, by different races or sets of men.

"Fin de Siécle Individualism" is brought to book by Gertrude Evans King.

"A Reporter's Recollections"—of work and incidents in the West some fifteen years ago—are supplied by J. L. Sprogle.

Under the caption, "Why I did not become a Smuggler," L. C. Bradford tells of an adventurous trip in Texas in 1878-9.

The poetry of the number is by May Riley Smith, Dora Read Goodale, Arthur D. F. Randolph, Charles G. D. Roberts, and Harrison S. Morris.

Several features of striking interest will be found in the opening numbers of The Living Age for the new year. The number for January 7 contains, among other things, a pungent and wholesome lecture on Art and Morality, by M. Ferdinand Brunetiere, which is translated for the magazine and copyrighted by it; the first instalment of The Etchingham Letters, which are attracting wide notice in the Cornhill by their cleverness; and the beginning of a short serial. The number for January 14, gives the full text of Lord Roseberry's recent address on Literary Statesmen, which has been the subject of general comment; an article from Blackwood's on The Ethics of Conquest, which relates to the Philippines; and a bright paper on The Madness of Mr. Kipling.

The Forum begins the new year with an excellent number. Sir Charles Dilke writes forcefully on "The Future Relations of Great Britain and the United States;" Adjutant-General Corbin contributes a paper on "The Army of the United States," showing the wonderful improvement of late years in its *personnel*; and Mr. G. Everett Hill, who was private secretary to the late Col. G. E. Waring, gives the substance of the Colonel's report to the United States Government "On the Sanitation of Havana." All of the remaining articles are eminently readable.

Announcement of Importance to Every Physician.—Messrs. Lea Brothers & Company announce for publication in March, 1899, the first volume of "Progressive Medicine," a new annual which will be issued in four handsome, octavo, cloth bound and richly illustrated volumes of about 400 pages each. The several volumes will appear at intervals of three months. In this age of unusual progress, so rapid is the advance in all departments of medical and surgical science that the need for condensed summaries which shall keep the practitioner up to date at the least possible expenditure of valuable time has become imperative. Many attempts in the way of Year-Books, Retrospects and Abstracts have been made to meet this growing need, but in nearly all of these the process of condensing has not been preceded by a sifting of the good from the useless, and consequently the reader is presented with a mass of information from which he must select, with care and study, the items which are useful and reliable.

What the busy physician needs to-day is a well-told tale of medical progress in all its lines of thought, told in each line by one well qualified to cull only that matter worthy of his attention and necessary to his success. He needs material which shall teach him all that the master of his specialty knows of the year's work.

It is with the object of presenting only such readable and useful material that these volumes are published, and every contrib-

utor to the pages of "Progressive Medicine" will say what he has to say in an original narrative form, so that every statement will bear a personal imprint expressing not only the views of the author cited, but the opinion of the contributor as well.

To insure completeness of material and harmony of statement, each narrative will receive the careful supervision of the General Editor, Dr. Hobart Emory Hare, whose reputation will everywhere be acknowledged as ensuring practical utility in a high degree. Those associated with Dr. Hare in the production of "Progressive Medicine," include a brilliant gathering of the younger element of the profession, well representing the class which is so energetically contributing to make modern medical history.

With the appreciation of the self-evident utility of such a work to all practitioners, the publishers are enabled to ask the very moderate subscription price of ten dollars for the four volumes.

The publishers offer to send full descriptive circulars and sample pages to those applying for them.

MISCELLANEOUS.

Acute Hemorrhagic Ascites.

At a meeting of the Royal Academy of Medicine in Ireland Dr. Finny recorded the clinical notes of a case of ascites which occurred in a gentleman, aged 42, and which ran its fatal course in three months from its onset. (British Medical Journal, Dec. 10, 1898.)

Paracentesis was required five times in the last three weeks, and removed six and a half gallons by simple drainage. The fluid from first to last was like blood in colour, and on standing, deposited a soft, deep-stained sediment, one-eighth or one-tenth of the volume. The patient was apparently, up to the last fortnight of his life, a healthy, well-nourished man, of a good fresh colour, a bright disposition, and of very active habits, and even up to a month before his death was able to go out a partridge shooting and walked eight miles, and all through his illness he had a good appetite and partook of solid food. He never experienced any gastric or intestinal distress, and were it not for the great size and inconvenience of the abdomen he made no complaint. However he was very sensitive to any jolting in a carriage and to any slight impact against the epigastrium. The primary diagnosis, based on the ascites and the apparent diminution of liver dullness, yielded after the second tapping to that of malignant disease of the omentum, although no tumour could be detected before or after tapping. This was confirmed by the *post mortem* examination which revealed a remarkable condition of the parts. The liver smooth and healthy, but pushed out of sight of the intestines, which were pressed to the right side by an enormous thickening of the transverse mesocolon and omentum by a soft growth, which filled up the whole of the left side of the abdomen, and was in part two inches thick, and which readily broke down on handling and oozed blood from every part. Dr. Purser pronounced the neoplasm to be sarcomatous. Dr. Finny pointed out the extreme rarity of hemorrhagic ascites; of its being in such quantity as to make tapping imperative; of its so rapidly re-forming; and of the absence of all inflammatory symptoms or rise of temperature.

Diphtheria as it Occurred in Two Families in West Texas.

In the early part of November, 1898, the local doctor was called to see a girl of two years in Mr. W.'s family of eight children, ranging in ages from one to fifteen years. Located—eight miles from railroad, in a most isolated place, on a high gravel knoll with good drainage. No one had been there, and they had not been any where. Upon examination the girl's soft palate, both anteriorly and posteriorly, both tonsils, posterior pharynx, posterior and anterior nares were covered and filled with the characteristic membrane of diphtheria, and the glands of the neck were so swollen that it made a straight line of the surface from the clavicle to the inferior maxillary on either side. It was the sixth day of her illness, that the doctor first saw her.

Bacteriological examination proved the diagnosis. She was put on antiseptic and tonic line of treatment, which did no good, for the toxæmia continued and she succumbed to the ravages of the disease the twelfth day.

During her illness the doctor was told that the girl two years younger had had a similar sore throat for ten days prior to the former's illness, and on examination of her throat found pharyngeal paralysis.

The house and contents were thoroughly disinfected, but in four days later a boy six years of age showed membrane on both tonsils, and temperature 103. He was at once isolated, and antiseptic and tonic treatment pursued with a steady progress of the disease until the seventh day when anti-diphtheritic serum, P., D. & Co.'s was obtained and 1500 units injected, and repeated the next day with 1000 units; the

membrane disappeared on the third day after first dose of serum, and the patient got along nicely with the exception of a slight irritability of the stomach.

Seven days after the membrane had disappeared the boy died very suddenly of what was taken for a stroke of paralysis.

A neighbor lady of Mr. W.'s had what appeared to be a well developed case of diphtheria, after nursing the sick girl, but recovered in a few days with a tonic and antiseptic treatment.

Her little girl of six years developed a marked case on the 20th of November, membrane on both tonsils and temperature of a 103. She received anti-diphtheritic serum, 1000 units, on third day of her illness, and 1500 on fourth day, the membrane all disappeared on the third days from first injection, and she recovered without any sequel to date.

J. R. Gilbert, M. D.

Ranger, Texas.

Rheumatism in Children.

It is a recognised fact that many diseases present peculiar clinical characters in young children which are not seen in adults, says an editorial in the "Archives of Pediatrics." In some diseases the clinical course is so dissimilar in infants and adults as to make them seem like totally different conditions. This is particularly true of rheumatism, and led to the belief in former years that the disease did not occur in early childhood. It is now known that that belief was an error.

Among those who have studied rheumatism in children most careful and have done most to correct older errors of belief regarding it, is Dr. W. B. Cheadle. In a recent article in "Treatment," he describes the various peculiarities of the disease in the young, and writes most judiciously regarding the treatment. He refers particularly to the fact that the risk of cardiac complications in acute rheumatism is in inverse proportion to the age of the patient. Hence the great importance of an early and correct diagnosis of rheumatism in children. But such a diagnosis is, unfortunately, often very difficult to make, and not commonly acute rheumatism is only thought of as a cause of some childish ailment when irremediable damage has been done to the heart by an endocarditis or percarditis which has run an insidious course. And yet, if sought for carefully, there are in nearly every instance certain symptoms which ought to suggest the true nature of the ailment.

The mistake made in the diagnosis of acute rheumatism in children arise chiefly from the fact that in this class of patients the symptoms of arthritis, acid sweats and pyrexia, to which we trust chiefly in diagnosing the disease in older people, are less prominent. The disease runs what in the adult would be called a sub-acute course. In acute rheumatism of early life arthritis is at its minimum; endocarditis, pericarditis, and chorea at their maximum; pleurisy, tonsillitis, and the vaso-motor and hæmorrhagic phenomena, the erythemata and purpura, are more common, tending to decline as puberty is passed. There is also a special tendency in children for the various phases of the affection to arise independently and apart from one another. This is an important point, which Dr Cheadle was one of the first to point out. Endocarditis or pericarditis may arise in a rheumatic child not only without any accompanying joint affections, but, in rare instances, without any recognised rheumatic phenomena to give warning of the nature of the true complaint. As a rule, however, a slight stiffness of the joints, chorea, crop of nodules, or erythema give some slight indication of a rheumatic condition. When a case of endocarditis or pericarditis arises in a child there is always a strong *prima facie* presumption that it is rheumatic. If, with the cardiac affections, we have chorea, fibrous nodules, tonsillitis, erythema or pleurisy, whether these have occurred recently or have cropped up at intervals through months or even years, the cardiac inflammation is almost certainly, rheumatic.

The existence of a family predisposition is of great significance. The occurrence of the conditions mentioned above and even the presence of the subcutaneous nodules alone, which are pathognomonic of rheumatism, are sufficient for diagnosis. As the heart affection is so serious in children this organ should be carefully examined whenever any of these rheumatic symptoms are met with, and in every feverish attack, simple though it may appear, the condition of the heart should be regularly ascertained.

Rontgen on the Rontgen Rays.

Such a host of investigators have devoted themselves to the development of Professor Rontgen's great discovery, that it would be no matter for surprise if there was nothing left for the discoverer to find out about his own discovery. Some novel properties of the X-rays, however, have been described by Professor Rontgen in a third communication on this subject to the Berlin Academy. Among these the following appear to be specially interesting:

If a fluorescent screen is covered with a

plate completely opaque to the X-rays, a slight fluorescence can nevertheless be seen when the tube is in action. Rontgen has shown that this is due to rays proceeding from the air of the room, which emits X-rays wherever it is itself exposed to their action. This fact points to the necessity of placing photographic plates in a sheath of lead when used for long exposures, to prevent them being fogged by diffused rays from the back or sides. Of the rays which are given off by the platnum plate of a focus tube, those are most effective for producing pictures which leave the platinum at as great an angle as possible, within a limit of 80 degs.

The specific transparency of bodies is greater the thicker the body. The ratio of the thicknesses of two equal transparent plates of different material is dependent on the thickness and the material of the medium through which the rays have to pass before they reach the plates.

For instance, the ratio of the thickness of platinum and aluminum plates of equal transparency will be reduced to one-half if the rays are passed through a thick glass plate before they strike the metal plates. Rontgen, like Swinton and others, has shown that the contrast between bodies of different transparencies depends on the E. M. F. used to excite the tubes.

A spark gap in the secondary circuit acts in the same way as an intercalated Tesla transformer; both produce more intense and less easily absorbed rays. By the use of a Tesla transformer and wire electrodes in a narrow tube, X-rays can be produced with a vacuum of 3.1 mm., the usual vacuum being, of course, about 0.0002 mm. Hard tubes, as Rontgen calls those tubes which require a very high E. M. F., can be softened, as is well known, by heating, or by re-admission of air, or, as is not so well known, by heating limetree charcoal placed in a side tube, or by sending through the tube a very powerful discharge. The composition of the rays given off by the platinum anti-cathode depends essentially on the time change of the discharge current. The quantity of the rays is not affected by the change of the primary current, but their intensity is proportional to the strength of the primary current.

Heredity and Disease.

Dr. Harry Campbell, in an essay on the "Marriage of the Unfit." which was published in a recent issue of the Lancet, says: "I maintain that all diseases are hereditary; you cannot eliminate the influence of heredity from any disease, and I will prove it. What is disease? It is an abnormal life. And what is life? It consists of an interaction between the individual and his environment. Therefore disease is abnormal interaction between the two. It follows that you cannot possibly eliminate the part played by the individual from the causation of any disease, since it is his structure which determines whether he shall or shall not react abnormally to a given environment. Now his structure is essentially determined by heredity. I have therefore proved my point. This is no mere logical quibbling, but a practical fact. I will test my position by taking a disease with which most people will probably say heredity has nothing at all to do—the wheal caused by flea-bite. This affection depends upon the morbid interaction of the host and the specific environment constituted by the poison with which the parasite inoculates him. As every one knows, the liability to be flea-bitten and the tendency to suffer from wheals when thus bitten differ greatly in different individuals. Some suffer little or not at all in this way; others grievously. Upon what does this difference depend? It depends upon differences in the organization or structure of the host, and these differences are essentially determined by heredity. Hence all parasitic diseases, from a flea-bite to pulmonary consumption, from typhoid to malignant tumor, are hereditary. Such diseases depend upon defect in the organism as regards some specific environment; but others, such as chronic Bright's disease, diabetes, ovarian cyst, strangulated hernia, may occur independently of any specific environment, and it is obvious that these are, *a fortiori*, hereditary.

Hypnotism in the Treatment of Alcoholics.

Dr. Rybakow, draws the following conclusions from cases under his own observation as well as from the literature on the subject.:—(1) Alcoholics are very susceptible to hypnotism. and subject themselves to hypnotic influence much more readily than many other patients. (2) Hypnotism is a very good remedy in the treatment of alcoholism. (3) The favourable effect of the treatment shows itself in the improvement of the subjective symptoms, the disappearance of the depression, of the apathy, and finally, in the complete loss of the thirst for alcohol. Sometimes one sitting suffices not only to overcome the desire for the habitual portion, but also to break off acute attack. (4) By repeating the sittings one may at times delay the patient's cravings; the intervals, however, vary, depending entirely upon the individual characteristics.

(5) Complete cure by hypnotism, according to the experience of the author, is seldom obtained; relapses also are proportionally frequent. However, other authors report instances of complete cure by hypnotism. The duration of the treatment depends especially upon the degree of degeneration; the milder the degeneration the more positive and lasting the cure. (6) Relapses are most frequently noticed in patients under this treatment when the sittings are discontinued too early. (7) In the treatment of the craving for alcohol by hypnotism, the utmost care should be taken in reference to the promptness of the sittings. (8) The hypnotic treatment may be instituted at any time; it is, however, better that the sitting take place during the state of sobriety. At all events, it should be delayed until the agitation and hallucinations have subsided.

Family Prevalence in Relation to Inheritance.

Family prevalence, as distinguished from inheritance, is certainly a remarkable phenomenon. (Archives of Surgery, Oct. 1898.) It would imply that conditions so produced are due to some peculiarity resulting from that particular couple, and not from either parent singly. The close similarity often observed in twins, both as regards features and morbid tendencies, is an example of the same kind of influence. In animals which brings forth many at a brood we find no difficulty in conceiving that one litter may differ from others bred of the same parents. An instance in which of a litter of rabbits nearly all had congenital cataract once occurred under my own observation. Probably it will be found on careful investigation that this difference between inherited and family prevalence, upon which Adams insisted so strongly, is not, after all, of universal prevalence. Some degree of inherited tendency may probably be found in most instances of family prevalance. In the case of retinitis pigmentosa and deaf-mutism this is not infrequent. Still, however, the main fact remains unquestioned that it is quite possible for several brothers and sisters to show some very peculiar form of proclivity which cannot be traced in any progenitor.

Soil as a Factor in the Spread of Disease.

Dr. John Robertson (Treatment, Sept. 8, 1898.) before the British Medical Association, referred to the great importance of the subject, which he said had not received the attention it deserved until the past ten or fifteen years. Numerous investigations were now going on, and it was much to be desired that the subject should be put upon a scientific basis. In some experiments which Dr. Maitland Gibson and himself had undertaken they found that in typhoid planted at a depth in the surface there was noted a tendency to grow upwards rather than downwards. That tendency had a most important bearing on the spread of disease by the soils. During the winter months, organisms disappeared from the surface soil, and apparently took refuge in the deeper layers of the ground. But even there the typhoid organism will not survive unless the soil has been contaminated with organic pollution.

The important question was how the disorganism was transferred from the soil to the man, and he felt certain that dust was, under certain conditions, the chief agency in the transference of the poison from the soil to the subject. That might be direct or indirect. The practical conclusion was that infectious particles in the air were heavy, and quickly subsided if the air was allowed to remain still. He was inclined to believe that the "raft" theory was the correct one, and if that were the case, it went far to explain why only the persons living in or entering an infected area became infected. Such heavy particles would not travel a great distance, but would rather tend to contaminate the food and water in the area.

The Infectivity of the Urine in Typhoid Fever.

The fact that the urine of patients suffering from typhoid fever may contain the typhoid bacillus in large quantities, though it has been established by the observation of several observers, has not, perhaps, attracted the attention which it deserved. The British Medical Journal states that Wright and Semple have published that in six out of seven cases examined, the bacillus was easily detected in the urine, and they pointed out the important bearing of the observation on practical hygiene. Last year Dr. P. Horton Smith read a paper at the meeting of the Royal Medical and Chirurgical Society in which he showed the bacilli might be present in the urine at some period of the disease in enormous quantities—from 5,000 to 172 millions per c.cm. of urine. In one case the organisms were preceded by blood in the urine; in the rest there were no concomitant symptoms save a trace of albumen and turbidity of the urine. The bacilli generally appeared suddenly, and, what is of the greatest importance, he never found them in the first or second week. Dr. J. Petruschky, director of the Bacteriological Institute at Dantzig,

has recently examined the urine in fifty cases of typhoid fever, and in three he found the bacillus in enormous numbers, in all cases late in the disease. The bacilli persisted in the urine after defervescene for a period more or less prolonged—in one case for two months, in another for four weeks, and in another for eight days. The fact that the urine may be infectious to man was established by an unfortunate accident, which Dr. Petruschky relates. The sister of the ward accidentally drank a small quantity of urine which had been passed by a typhoid patient into a wine-glass, and after an incubation period of twelve days she developed typhoid fever. The subject is one which appears to require further investigation, more especially as to the period of the illness at which the bacilli may be expected most probably to appear in the urine, since if it should turn out that they are present as frequently as Wright and Semple suppose during an early stage, the bacteriological examination of the urine might be a valuable aid to diagnosis in doubtful cases. The facts already known, however, are quite sufficient to emphasize the importance of disinfecting the urine and of instructing nurses and others about the patient to exercise the most scrupulous care in disinfecting their hands, or any vessels which may have become contaminated with urine.

Protective Action of the Liver against Microbes.

Roger, according to the British Medical Journal, has found that certain cultures of anthrax bacillus introduced into a branch of the portal vein did not kill rabbits, whereas cultures of the same virulence injected into other blood vessels did cause death. He then found that the lungs possessed a protective action against the streptococcus, whilst the liver possessed none. The staphylococcus aureus grows rapidly in the brain, but, like the anthrax bacillus, is destroyed by the liver. The liver seems to be powerless against bacillus coli, and even to favor the growth of this microbe. Both liver and kidney arrest the growth of oidium albicans. Recently Roger has made further experiments on rabbits to determine what conditions modify the protective action of the liver. This protective action is less marked when the animal is kept without food, but remains observable even after three days of fasting. If ¾ c.cm. of a sterilised culture of bacillus prodigiosus is injected into an intestinal vein, the liver loses all its protective power against staphylococcus aureus. Large doses of glucose—given by the mouth—weaken the protective power of the liver, whereas small doses increase it. The effect of ether is most striking; 5 drops of ether injected into the portal vain, or 2 c.cm. given by the mouth, abolish the protective action of the liver, whereas small doses by the mouth —2 or 3 c.cm. of a solution of ether in alcohol and water—increase it. When the ether is injected subcutaneously its effect is much less marked. Perhaps the beneficial action of portions containing ether, in the case of patients with infectious diseases, may be explained on the supposition that dilute doses of ether given in this way increase the protective action of the hepatic cells against certain microbes.

The Liability to Cramp after Sleep.

It is, says Jonathan Hutchinson, well known that the state of sleep predisposes to cramp in muscles. The exciting cause is probably always muscles action. Of all the muscles in the body the gastrocnemius is probably the one most prone to it. The usual time for its occurrence is just after waking in the morning. It may, however, in restless sleepers who move their limbs in bed, come on during sleep and put an end to it by the pain caused. Those liable to cramp in the calf must be very careful as to movements of their legs just after waking. When once the sleep state has passed off and the muscles are, so to speak, thoroughly awake, there is comparatively little risk of its coming on.

I was explaining the above to a patient who had suffered much from cramp, when he replied: "Yes, I have found that out for myself, and I am so determined to avoid bending my legs soon after waking, that I always take care that the bed clothes are not tucked in, so that I can slide out of bed feet first to keep them straight."

Cold Feet.

Digestion. says Jonathan Hutchinson, always increases the liability, and attacks may come on during a meal or soon afterwards. If a meal causes cold feet, headache will usually follow. In many patients any little mental worry or excitement brings on an attack. Patients liable to frequently recurring coldness of the feet and hands sometimes say that nausea or even vomiting may be caused if the feet become very cold. I think that the feet have more influence in this respect over the stomach than have the hands. The mere fact of the feet being cold (say from tight boots) will often cause headache. On the other hand, severe headaches, however caused, are usually attended by cold feet.

Programme of the First Annual Session

OF THE

Tri-State Medical Society of the Carolinas and Virginia, to be held at Charlotte, North Carolina, January 18th to 20th, 1899.

TEMPORARY OFFICERS.

President (temporary), Dr. W. H. H. Cobb, Goldsboro, N. C.; Treasurer, Dr. H. H. Dodson, Milton, N. C.; Secretary, Dr. Paulus A. Irving, Richmond, Va.; Dr. E. C. Register, Charlotte, N. C., Chairman Committee of Arrangements,

11 A. M.—Opening of the First Annual Session.

1. Divine Invocation. Rev. H. F. Chreitzberg, D. D., Charlotte, N. C.

2. Address of Welcome on Behalf of the Profession and the Citizens of Charlotte. Col. H. C. Jones, Charlotte, N. C.

3. Response to the Address of Welcome. Dr. Hugh T. Nelson, Charlottesville, Va.

4. Address by the President. Dr. W. H. H. Cobb, Goldsboro, N. C.

5. Executive Session. Reports of Officers. Reports of Committees.

6. Registration of Members.

PAPERS.

1. Purposes of Tri-State Medical Organizations. Dr. Paul B. Barringer, University of Virginia.

2. Psuedo Membranous Enteritis. Dr. J. M. Fladger, Summerton, S. C.

3. Cold as a Remedial Agent. Dr. E. B. Glenn, Asheville, N. C.

4. Lithemia. Dr. J. N. Upshur, Richmond, Va.

5. Blood-Washing and Blood-Letting. Dr. A. B. Knowlton, Columbia, S. C.

6. The Early Recognition of Pulmonary Tuberculosis and of the Pre-Tubercular State. Dr. Charles L. Minor, Asheville, N. C.

7. A plea for the Earlier Recognition of Consumption. Dr. Louis F. High, Danville, Va.

8. Food and its Auxiliaries. Dr. F. W. P. Butler, Edgefield, S. C.

9. The Treatment of Urethral Discharges. Dr. James M. Parrott, Kinston, N. C.

10. Remarks on the Relation of Diet to Hay Fever and Asthma. Dr. John Dunn, Richmond, Va.

11. Typhoid Fever: Diagnosis and Treatment. Dr. Rolfe E. Hughes, Laurens, S. C.

12. Reports of Cases, etc. (Followed by general discussion.)

13. Appendicitis Complicated with Internal Perforation. Dr. George W. Long, Graham, N, C.

14. Diagnosis and Treatment of Tuberculosis Peritonitis. Dr. W. L. Robinson, Danville, Va.

15. Report of Cases of Rupture of Uterus during Pregnancy. Dr. Frank D. Kendall, Columbia, S. C.

16. Dystocia. Dr. David A. Stanton, High Point, N. C.

17. Vomiting in Pregnancy. Dr. R. S. Martin, Stuart, Va.

18. The Treatment of Placenta Previa. Dr. J. C. Harris, Anderson, S. C.

19. Application of Electricity to Diseases of Women. Dr. W. T. Woodley, Charlotte, N. C.

20. Material Aids in the Management of the First and Second Stages of Labor. Dr. James Albert Anderson, Danville, Virginia.

21. Tubal Pregnancy. Dr. Virginius Harrison, Richmond, Va.

22. Abdominal Palpation Versus Vaginal Examination in Obstetrical Practice. Dr. John F. Winn, Richmond, Va.

23. Ovaritis, Acute and Chronic. Dr. L. G. Frazier, Youngsville, N. C.

24. Diagnosis and Treatment of Cancer of the Breast. Dr. Hunter McGuire, Richmond, Va.

25. The Importance of Early Operation in Appendicitis. Dr. John Whitehead, Salisbury, N. C.

26. Surgical Treatment of Duodenal Ulcer. Dr. Hugh M. Taylor, Richmond, Va.

27. Drainage in Abdominal Surgery. Dr. J. W. Long, Salisbury, N. C.

28. Sciatica and Its Treatment. Dr. Samuel A. Lile, Lynchburg, Va.

29. Report of Two Cases of Nephrectomy. Dr. George Ben. Johnston, Richmond, Va.

30. The Report of a Case of Complete and of Partial Ophthalmoplegia of the Right Eye. Dr. Charles W. Kollock, Charleston, S. C.

31. The Eye as a Causative Factor in Functional Nervous Diseases. Dr. W. H. Wakefield, Charlotte, N. C.

32. The Present Status of Laryngology and Rhinology. Dr. W. Peyer Porcher, Charleston, S. C.

33. Headache—Ocular and Nasal. Dr. J. A. White, Richmond, Va.

34. Brief Report of Cases. Dr. J. Steven Brown, Salisbury, N. C.

35. Treatment of Fractures. Dr. Hugh T. Nelson, Charlottesville, Va.

36. Subject not yet received. Dr. S. C. Baker, Sumter, S. C.

37. Some Practical Points in the Treatment of Diphtheria. Dr. Ramon D. Garcin, Richmond, Va.

38. What Medicine Owes to Bacteriology. Dr. E. C. Levy, Richmond, Va.

39. The Medical Examining Boards of

North Carolina and Virginia: Their Relation to Each Other and the Profession. Dr. A. S. Priddy, Keysville, Va.

40. State Institutions for Epileptics. Dr. William Francis Drewry, Petersburg, Va.

41. Examination of Feces as Aids to Diagnosis. Dr. H. Stuart MacLean, Richmond, Va.

42. The Influence of Chronic Nasal Occlusion on Cerebration. Dr. Dirk Adrian Kuyk, Richmond, Va.

43. Diagnosis of Renal Calculus. Dr. Moses D. Hoge, Jr., Richmond, Va,

44. The Practical Treatment of Carbolic Acid Poisoning. Dr. Stephen Harnsberger, Catlett. Va.

45. Modern Views on the Nature and Treatment of Pulmonary Consumption. Dr. H. B. Weaver, Asheville, N. C.

Unfinished Business: Papers previously announced and still unread. Volunteer papers. Adjournment.

RAILROAD FARES.

The railroads have granted, through the instrumentality of the Southeastern Passenger Association, a reduced rate, only charging one and one-third fare to and from Charlotte from any point in the three States.

Conditions: Each person desiring to avail himself of the reduced rate must purchase a first-class ticket to the place of meeting (Charlotte). Tickets for the return journey will be sold at one-third the first-class tariff fare only to persons holding certificates of the standard form duly signed by Dr. W. H. H. Cobb, president, and vised by T. J. Witherspoon (C. T. A. S. Railway) as special agent. These certificates will be svpplied by the secretary.

HOTEL RATES.

The Central Hotel, which has ample accommodations and which is very near the hall where the meeting will be held, will be the headquarters of the Association, and have granted a rate of two dollars ($2.00) a day to members of the Association.

Appendicitis and Renal Colic.

Dieulafoy, in a clinical lecture, says the British Medical Journal, points out that in some cases the diagnosis between appendicitis and renal colic is one of considerable difficulty. A patient under his care had two years previously suffered from pain in the right side of the abdomen, somewhat diffuse in character, and accompanied by vomiting and constipation. There were three attacks in all at different times, and on one occasion the diagnosis was thought to lie between hepatic and renal colic. On the last occasion it was noted that there was no tenderness over the cæcum, and from the fact that there was severe testicular pain the medical man in charge of the case concluded that it was one of renal colic. Dieulafoy, who saw the case, however, was inclined to doubt the diagnosis of renal colic, as there was no tenderness over the kidney: and, secondly, from the fact that the testicular pain gradually increased in intensity to subside in the same manner instead of coming on suddenly and rapidly disappearing, as in renal colic. The case was operated on by Marion, who found a curved appendix lying behind the cæcum. It was in an ulcerated condition, and adherent to the psoas-iliacus. In this situation it exerted some pressure on the genitocrural nerve. In point of fact, this nerve is partly distributed to the cremasteric and testicle, and it is to its irritation that the testicular pain of renal colic is due; consequently, the result in an appendicitis of this nature, or renal calculus, etc., will be the same although the cause is different. Dieulafoy states that in very many cases he has noticed a certain degree of similarity in the symptoms of appendicitis and stone in the kidney.

Growing Pains.

Dr. Bennie says that "growing pains" have been diagnosticated by him less frequently as the years rolled by, and that cases which have been classified together under this name are the following:—Myalgia from fatigue: this is the commonest variety, usually about the knees and ankles after unusual exertion. They are probably due to auto-infection brought about by excessive production of effete materials in the blood and their inefficient elimination. Elevating the limbs and rubbing with the palm of the hand in a direction towards the heart, relieving venous stasis and facilitating a supply of healthy blood to the exhausted muscles, promptly quiets the pain. Rheumatism: This is second, if not first, in frequency. There are slight pain in the joints, little or no swelling, and very mild fever, and hence the true cause is recognised; but rheumatic endocarditis frequently develops in these cases. Diseases of joints and bones of the lower extremities: Cases of hip-joint disease and suppurative epiphysitis of the upper end of the fibula, diagnosed by the laity and allowed to go on untreated, are related under this heading. Fevers, accompanied by pains in the limbs, in one instance proving to be the inception of typhoid fever, constitute this class. The malady "growing pains," with its frequent concomitant, growing fever, like its congener,

disorders of dentition, as a separate morbid entity exists principally as an article of faith. The complaint still maintains, however, a strong hold on the lay mind, and forms an extremely common lay diagnosis, which is often the cause of much suffering and even death.

Certain Points of Interest in Phthisis.

H. P. Loomis (Medical Record) concludes that the prognosis of phthisical patients with poor digestive powers is very bad. It matters little what their lung-condition is, they seldom recover. Climate avails little, and medication is worse than useless. When assimilation is good, the prognosis is always favorable, often even with desperate lung-conditions. Rapid heart-action renders the prognosis bad when observed in a beginning tuberculosis. Age modifies the type. Phthisis of advanced age is often latent in its beginning, slow of advance, tending destruction of limited portions of the lung. Patient often linger for years when provided with comforts of life, have proper food and a fair allowance of stimulants. Hemoptysis early in the disease does not affect the prognosis one way or the other, especially if it is not followed by fever, which lasts for a number of days. Heredity, not considered as the causal agent, has very little to do with the patient's chances of recovery. Alcoholic subjects do badly. They develop rapid hearts and dyspnea. At any place of altitude the dyspnea and hemoptysis increase. Unless a patient gains in weight he is not doing well, no matter which way his other symptoms point. Before a patient can gain in weight, the fever must diminish or disappear, the assimilation must be good, sleep must be fair, and sweats stop. A person with a strong determination and a happy disposition, who has made up his mind to get well, has, the author believes, a far better chance than one with a nervous disposition, who has no inherent reserve power and who is easily influenced by his surroundings. The location of the lesion is important. A man in the third stage with a cavity at the apex has more chance than one with slight tuberculous changes scattered throughout the lungs. The prognosis is good in those cases which develop secondary to pleurisy.

There is a way of examining the lung, which will reveal a very small lesion. The patient's hand is placed on the opposite shoulder, the ear is placed over that portion of the lung uncovered by the scapula, viz., just above and external to where the bronchial tubes are given off; there will be heard prolonged tubular breathing and fine râles on coughing. This is the very first physical sign of tuberculosis—an evidence which will make a diagnosis possible weeks before the signs are evident in front and beneath the clavicle. These signs generally antedate any expectoration. One help in the diagnosis of doubtful cases is often omitted, although very important, i. e., the tuberculin test By its aid tuberculosis in the human subject can be detected just as accurately as in cattle. It is useful both in making the diagnosis of a beginning case and in deciding if a case is cured. It is to be applied in the following manner: Take the patient's temperature every six hours for a few days to see he has no diurnal temperature above normal; then inject one-half milligram of tuberculin and have his temperature taken every four hours during the next twenty-four hours. At the end of two days, if there has been no temperature above one degree, a second injection of two milligrams should follow; if there is still no reaction after two days more, a third and final injection of five milligrams is given. If there is still no reaction, the patient is free from tuberculosis. A newer aid in diagnosis is the X-ray. This gives corroborative evidence and enables us to recognize the extent of consolidated areas and cavities.

The Action of Mineral Waters and Drugs on the Bile.

W. Bain (Journal of Balneology, July, 1898,) records investigations he has carried out in the case of a man, aged forty-nine, with a permanent cutaneous biliary fistula. He comes to the following conclusions: The amount of bile secreted in the twenty-four hours in a man somewhat below medium height and weight averages 775 cc.m., and the bile solids 15.8 grammes. More bile is secreted during the day than at night. The sulphocyanate of potaeh in the saliva is not derived from the biliary salts. The old sulphur spring of Harrogate, Carlsbad mineral water, euonymin, benzoate of soda, salicylate of soda, and the Kissingen Spa Spring of Harrogate, increase both the quantity of bile and bile solids. Podophyllo-resin and iridin augment the bile-solids without appreciably affecting the quantity of bile. The strong Montpellier Spring of Harrogate and podophyllo-toxin appear to diminish slightly both the quantity and the solids. Hot water and soda water in pint doses do not seem to increase the biliary secretion. Salicylate of soda increases the excretion of uric acid in the urine. Dr. Bain also gives an excellent account of the literature of the subject.

Vaginal Bacteria in Pregnancy.

Since Bóderlein published his monograph entitled *Das vaginal Secret* in 1892, this subject has appeared to be one of great fascination to large numbers of gynæcologists, both on the Continent and in the United States. Unfortunately, says the British Medical Journal, Nov. 12,1898, the bacteriological equipment of many was deficient, and the startling results at which the earlier observers arrived have fortunately been proved by the recent careful work of Króng in Leipzig and Whitridge Williams in Baltimore to be due largely to faulty technique. Several important facts seem at length to have been established. Dóderlein was the first to isolate from the vaginal secretion of pregnant women a special organism which he named the vagina bacillus; this organism has now taken a definite place in the list of the bacterial flora of the human body, all observers being agreed upon its occurrence and its morphological characters. Dóderlein further endeavors to establish its claim to be regarded as one of the chief defences of the genital tract against bacterial invasion from without. He attributed to it the normal acid reaction of the vaginal secretion and distinguished two kinds of secretion in pregnant women, the "normal" and the "abnormal." The former was acid in reaction, and contained vagina bacilli only; the latter was neutral or alkaline, and from it the vagina bacilli had disappeared, their place being taken by various organisms, some of which were pathogenic. He believed, further, that he had proved, by experiment, that udon certain pathogenic organisms, notably steptococci, the vagina bacillus exerted a powerful germicidal action; certainly he showed that the healthy vagina of a pregnant woman cannot be successfully inoculated with the common organisms of suppuration, but his efforts to show the antagonism of cultures were less successful. The well-known liability to infection after labour he attributed to the absence of the bacillus which is washed away by the liquor amnii, and which cannot long exist in an alkaline medium like the lochia. In cases in which the vaginal secretion was "abnormal," Dóderlein urged the employment of antiseptic douches as a prophylactic measure, and was a strong advocate of the possibility of autoinfection in pregnant women. Fortunately for the peace of mind of the accoucheur, Krónig and Whitridge Williams have now independently proved that, with the exception of the gonococcus, pathogenic organisms do not occur in the vaginal secretion of pregnant women, no matter what may be its physical characters. Dóderlein's results were due to faulty technique, that is, to insufficient care having been taken to avoid contamination from the vulva. Upon the bactericidal action of the vaginal secretion the latter observers support Dóderlein. Krónig has shown that cultures of the streptococci introduced into the vagina of a pregnant woman are destroyed within six hours. These facts have an important practical bearing. If the vagina does not contain pathogenic organisms during pregnancy, autoinfection from the vagina must be impossible; and the occurrence of septic infection must imply that organisms have been introduced from without. The potent bactericidal action of the secretion renders douching during pregnancy not only superfluous but possibly harmful. Lastly, since the presence of streptococci in the lochia implies the occurrence of streptococci infection, the discovery of this organism should be regarded as an important diagnostic point in relation to morbid conditions of the puerperium.

Electricity as an Aid to Diadermic Medication.

Gilles discusses the aid of electricity in introducing medicine into the system through the skin, and states that it is not yet certain whether process is merely mechanical—that is, one of cataphoresis—or truly chemical—in other words, electrolysis. (British Medical Journal). The assimilation has been proved at both poles, electropositive bodies, such as lithium, being best absorbed at the anode, and electronegative, as iodine, at the cathode. The author has, however, succeeded in proving that the absorption of iodine takes place to some extent at the anode. The drug should be given in dilute solution, the surface of contact large, the density of the current accordingly small, and its intensity as high as possible. The indifferent pole is formed by a bath of salt solution into which the hand or foot is dipped, the active by a local bath applied to the affected part. When this is impossible, a pad of wool is soaked in a solution of the electrolyte and the current distributed through it by means of a pewter electrode. Other methods are detailed by the author for use in special cases. Chloride of lithium given diadermically produced excellent results in 4 cases in which the administration was commenced just as the attack was declining; in 2 others there was no apparent result. Chronic gout was usually unaffected, though in 2 cases small tophi disappeared during the treatment. Acute rheumatism was only benefited during convalescence, but the administration of lithium in this way restored mobility to

several joints which had ankylosed through the disease; in a case of rheumatoid arthritis no good resulted. In chronic rheumatism the muscles were favorably influenced, and the joints, except in 1 case, improved, though incompletely. In all cases pain was alleviated, at any rate temporarily. No therapeutic effects have hitherto been obtained by the diadermic use of bromide of potassium. The author next proceeded to investigate the possibility of using iron in the same way; he employed a solution of the sulphate to which a small quantity of tartaric acid had been added. The current was not as a rule more than 20 milliamperes; the foot alone could be employed, as the absorption of the drug produced a yellowish-brown tint of the skin, most noticeable after a day, and persisting for several months. In chlorosis and simple anæmia the results were very good, the gastric troubles and general condition rapidly improving; in neurasthenia and hysteria they were similar to those from other electrical methods, but less certain. The administration of iron in this way appears to have a good effect in cases of hæmorrhage; 1 of recurrent epistaxis was particularly benefited by it. The method is evidently worthy of an extendid trial.

Christian-Science Fanatics.

Dr. I. N. Love, the brilliant editor of the St. Louis Medical Mirror, gives the Christian Science people his opinion as follows:

Surely one who has lived in this world for any length of time ought not to be surprised at anything. And yet one cannot suppress a feeling of astonishment, mingled with contempt, to see sensible people carried away by the fanaticism of Christian Science, so-called. Hardly a day passes that we do not see the record of some flagrant case of neglect and death traceable to the vagaries of Christian Science. It is but a short time since one of our most prominent attorneys in St. Louis, bearing the title of Judge, permitted his only daughter to suffer for several weeks with typhoid fever, and cruelly deprived her of a physician, though she clamored piteously for one, her mother responding to her appeals only with the assurance that if she only willed it she was not sick, forcing her to get up daily and dress herself and go about the house in the performance of light domestic duties.

The result of course was death. In the face of this experience the mother subsequently died from cancer of the womb, from which she might have been saved, had the case been placed at the proper time under the care of a skilled physician. We can excuse these things upon the part of weak, emotional women. But how supposedly strong men, men of brains, force of character, and judgment necessary to attain eminence at the bar, can be a party to such madness is beyond comprehension upon any other grounds save that of mental aberration. In this case and in others the father should have been indicted for man-slaughter, and should have been punished.

Tubercular Peritonitis in Children.

Dr. Marfan distinguishes three vatieties of tubercular peritonitis in children. (Medico-Surgical Bulletin, Dec. 25th, 1898).

Ascites tuberculosus chronicus. This is the most frequent form, either ending in recovery or developing into peritonitis fibro-caseosa. In this event the ascites diminishes and becomes encapsulated with the gradual production of tubercular masses. Recovery in this form is extremely rare. An abscess usually develops, which may rupture into the intestines or externally in the umbilical region. Sometimes the degenerated lymph-glands form fibrous adhesions with the neighboring tissues and lead to the third variety.

Peritonitis tuberculosa fibro-adhesiva. In this variety occlusion of the intestines may result from the overproduction of fibrous tissue. Compression of the liver and spleen may also take place.

In the medical treatment of tubercular peritonitis cod-liver oil and creosote or its derivatives are of value, and must be tried in mild cases, as tubercular peritonitis has in many cases a tendency to heal spontaneously. Laparotomy is, in the author's opinion, indicated in: Cases of peritonitis fibro-caseosa with ascites. Localized peritonitis with encapsulated fluid. In cases of resulting intestinal obstructions.

How to Avoid Tuberculosis.

H. Tucker Wise (Med. Record) recommends the following to maintain health and ward off a recurrence of the malady:

A generous dietary of nitrogenous food. Free ventilation of dwellings and sleeping-rooms by open windows with wire-gauze blind. Adequate house-heating in winter. Boiling of all milk and cream previous to use. Eight hours of sleep should be obtained every night, if not sound sleep, contract the hours to seven and rest in the day. If debilitated with weak digestion, rest in the recumbent position a quarter of an hour before and after meals. The loosest clothing possible should be worn, especially

round the waist and lower ribs, to afford absolute freedom in respiration. Systematic exercise daily in the open air on foot. If means and station in life admit of a long holiday from time to time, live during the weather in a tent in the open air or in a summer house for most of the day; and, if unemployed, pursue a hobby to occupy the mind.

The Old Fashioned Saddle Bags.

We copy the following encomium on the morality of "the old-fashioned saddle bags" from a paper read before the Missouri Valley Medical Society, at Council Bluffs, Ia., Sept. 15, 1898, by S. D. Tobey, M. D., of Oakland, Iowa.

"To conclude, the saddle bags were looked upon as containing an element of morality which communicated itself to its surroundings. Next to the old minister, the family physician was looked to for advice, and was trusted to warn the youth of the country of the rocks and dangerous pitfalls of life. He would be called to counsel in many cases too delicate for even the venerable divine.

"There are articles which are now considered as indispensable, as the hypodermic syringe, which the saddle bags did not contain. There was the uterine speculum and the uterine sound. I do not mean any reflection on the legitimate use of these useful instruments. I refer to a use of them which too often reflects disgracefully upon a profession that of all others ought to represent the highest degree of honor, honesty, integrity and morality.

"By no means do I intend to insinuate that modern surgeons, as a class are guilty of malpractice, but I do mean to assert that in every town of any size there is always to be found at least one among the fraternity who could be depended upon to assist the unnatural wife in her efforts to avoid the responsibilities of maternity, or to assist the unfortunate victim of misplaced confidence, or perhaps of unholy lust, in concealing the evidence of her disgrace. The doctor with the old saddle bags would have spurned with righteous indignation a proposition of such an unholy nature.

"In proof of this we have only to compare the number of children born into the average family fifty years ago, with the families of to-day.

"Fifty years ago the average young lady possessed organs of which she was supposed to be entirely ignorant until she became a married woman. If she had a headache, or pain in the side, or dragging sensation in the pelvis, her mother had a private consultation with the man of the saddle bags, and as a result the girl was given some tansy tea, and a few days rest, and her complaints were soon forgotten. She did not flounce down town three times a week to her favorite doctor's office and plant herself in the operating chair with as much self assurance and confidence as though it were merely that of the dentist. The digital examination, the introduction of the speculum and the sound, and all the *modus operandi* of the specialist, which it is not necessary to mention, are taken as a matter of only ordinary significance, and bring not a blush nor even a feeling of natural revulsion on the part of the patient.

"Thank God! The vast majority of our girls have been blessed with mothers of too much sense for this state of affairs to become universal, but there is not a medical man of any experience who does not feel in his heart that such things are getting altogether too common in our land for the interests of morality."

Creosote in Chronic Constipation.

Vladimiro de Holstsin ("Cronica Medica") finds in creosote an excellent means of combating chronic constipation without exercising any purgative action properly so called. The creosote should not be prescribed in pills, capsules, or alcoholic solutions, but pure and in drops. The effective dose is about seven or eight drops taken twice daily, immediately after breakfast, and after dinner, in a glass of milk, beer, wine and water, or pure water. To begin with, one drop of creosote is administered, and that amount increased by one drop daily until the desired effect is obtained. In this way the necessary dose is determined for each case individually. This treatment has to be coutinued for some time, some months in fact, and not only overcomes the chronic constipation, but at the same time restores the appetite and braces up the system. Under its influence the stools become regular, bland, and copious, and free from pain or any sign of intestinal irritation.

To write an article for maids and mothers, and then to make it so interesting that it will rivet the attention of the fathers of maids and husbands of wives, is a guarantee of very wide reading. Professor Thurston Peck, of Columbia University, has succeeded in doing this in the paper which he devotes to women in the January Cosmopolitan. Professor Peck has a keenly analytical mind, and he weighs the *pros* and *cons* very carefully. His conclusions are tender and compassionate, but nevertheless very emphatic. It is a valuable contribution to "New Woman" literature.

The Gonorrheal Ophthalmia of Infants.

Dr. N. L. North presented a paper on this subject at the New York State Medical Association (Boston Medical and Surgical Journal, Jan. 5, 1899).

He said that the cause of the disease was the introduction of the gonorrheal germ into the conjunctival sac and the growth of the same. The infection might be received from the maternal genitals at birth, or from the mother or other attendant any time after birth. In case the mother was suffering from gonorrhea, the longer the labor was the greater was the danger to the infant's eyes. On this account males were more frequently affected than females because, by reason of the larger size and the greater hardness of their heads, more delay was occasioned in their delivery. The microscope enabled us to make a positive diagnosis of gonorrheal ophthalmia. As to prophylaxis, this was of the utmost importance, and the antiseptic precautions now so generally used in regard to both the mother and the child had rendered it a much rarer disease than formerly. The prognosis was grave, and the blindness of 75 per cent. of the inmates of the institutions for the blind in the world was said to be due to this cause.

When, however, prompt and efficient treatment was resorted to there were few affections in which more satisfactory results could usually be obtained. By the application of a 2 per cent. solution of nitrate of silver to the eyes of every infant born in it Credé reduced the mortality in his own hospital at Leipsic from 75 per cent. to almost nothing. For this prophylactic treatment Dr. North believed that a saturated solution of boric acid was quite as efficient as nitrate of silver, and it had the advantage that its use was followed by no reaction. Having given a résumé of the symptoms, he described the treatment which he usually employed.

The lids having been carefully opened and all discharge cleaned away, a solution of nitrate of silver of the strength of from ten to forty grains to the ounce, according to the circumstances of the case, was applied by means of the toothpick applicator. The eyelashes were then anointed with a little vaseline, squeezed from a collapsing tube, to prevent gluing of the lids and retention of discharges. Cold applications were kept up continuously, and the nitrate of silver once in twenty-four hours. Of late he had employed a solution of formalin (or formaldehyde) of the strength of 1 to 1,000, and had been much pleased with its effects. He had found that when using this a much weaker solution of nitrate of silver was required, and a weak solution could be applied by the nurse as often as desired. Formaldehyde had no harmful effect upon the structure of the cornea, and he considered it a most valuable addition to our means of treatment. These cases requiring the continuous application of cold compresses and the free use of antiseptics, naturally demanded the constant and most careful attention of both the physician and the attendants.

Syphilis in the Third Generation.

The alleged transmission of syphilis to the third generation—that is to say its transmission from an individual to his or her grandchildren, is a question not only of great theoretical interest, but also of no little practical importance. The report, says the British Medical Journal, Dec. 24, 1898, of the Committee of the Royal College of Physicians of London on Syphilis in the Army, presented last year, appeared to assert or assume that such transmission did occur. The evidence for such an occurrence has been re-examined by Dr. George Ogilvie, and a study of the series of alleged instances, which he has collected from literature with much industry and marshalled with great skill, hardly seems to warrant the conclusion to which he comes (not it would seem without reluctance) that evidence affords not indeed absolute proof, but a "reasonable probability" that syphilis may descend to the third generation. C. Hochsinger also has recently studied the list of published cases, and has laid down the conditions which must be fulfilled by any case which can be accepted as proving the occurrence: (1) It must be proved that the grandparent or grandparents had syphilis before the conception of the parent. (2) It must be proved that a parent (second generation) had congenital syphilis, and this can only be done if the individual is seen and treated in infancy, or if a series of quite characteristic lesions are manifested at a later age. (3) It must be proved that neither of the parents has suffered from acquired syphilis, and finally (4) It must be proved that the child (third generation) is really suffering from hereditary and not from acquired syphilis. It is on the third head that most of the alleged instances break down, and Hochsinger's conclusion is that there is not a single case on record in which the evidence is conclusive. It will be generally admitted that a very different fate may attend the products of conception of parents one or both of whom have suffered from syphilis. In a large but undetermined number of instances the fœtus dies *in utero* if the disease is in an active stage in

the parents. The child, if born alive, may succumb in early infancy to the severity of the disease, or it may present the well known lesion of hereditary infantile syphilis, and under suitable treatment reach the adult age, either without further manifestations or after suffering from the well known lesions of late hereditary syphilis. When it has reached the adult age the individual may present obvious traces of the disease, not only in lesions of mucous membrane, skin, teeth, and bones, but also in general stunting of growth and feebleness of health. On the other hand a child which has suffered from inherited syphilis in infancy may be thoroughly robust, and show no traces of the disease when it reaches the adult age. The proof that such individuals have recovered completely from the disease is afforded by the fact that they are liable to acquire syphilis. How often this occurs cannot be stated, but that it does occur there can be no doubt. These individuals, at least, could not have transmitted the disease of the fathers to the third generation. Not a little of the importance of syphilis from the point of view of public policy is due to the circumstance that in addition to the sickness and premature deaths which it causes among those who acquire it, it has a serious effect in diminishing fecundity and in increasing the death rate of the children which are born alive. If a woman have borne one syphilitic child it will usually be found that the mortality is very high among her offspring born later, even if they do not present obvious signs of hereditary syphilis.

A Speedy Method of Dilating the Rigid Os.

Dr. J. Farrar (British Medical Journal) in a paper read before the section of Obstetrics, British Medical Association, mentions a rapid method of overcoming this troublesome condition, which is best described by the following illustrative cases and comments:

Case 1.—I had been in attendance on a primapara on and off for some 48 hours. The os was thin, rigid, and obstinately unyielding; frequent attempts at stretching it, first with the finger, then with a mechanical dilator, both with chloroform and without it, and afterwards with india rubber bags, had all proved futile; as had also the internal exhibition of approved medicaments, chloral hydrate, bromide of potassium, morphine, etc. In spite of these attempts, however, the os still remained firm, its margin feeling almost like a circle of sheet tin, and its orifice not larger than a shilling. The pains were very strong, frequent, and almost persistent, and the patient—who was, I should add, a deaf mute—was losing self-control. The case was therefore becoming serious, and as it was necessary that relief should be given without further waiting, I determined to incise the margin of the os. The woman being, as I have said, a deaf-mute, and exceedingly frightened and despondent at the condition of matters, I could not on the one hand, as in ordinary cases, talk and reason with her, and tell her what I proposed to do; and, on the other hand, I scarcely thought it prudent to alarm her by the pain she would feel on the incision being made, as this would probably make her quite unmanageable; and as, further, the administration of chloroform was contraindicated owing to symptoms of approaching exhaustion, I had only local anesthesia left to me. The anesthetic I chose was cocaine. With a 10 per cent. solution of the hydrochlorate on a piece of rag I smeared the os round and round, first on the outside and then within, finally leaving the rag within the margin and the head of the child. At the end of four minutes, by which time I considered anesthesia would be sufficiently advanced for my purpose, judge of my astonishment—and I may say, my gratification—when on introducing the scissors to make my limited incisions, I found the os had not only lost its rigidity, but that it was widely open, and as flexible and distensible as a rubber bag. How had this sudden change in the physical condition of the os been brought about? Was it one of those striking cases of coincidence which the medical man meets with occasionally, or was it owing to the application of the cocaine? It struck me very forcibly that mere coincidence could not satisfactorily explain the phenomenon. The change was too striking and too suddenly brought about; and I felt strongly that coincidence had nothing to do with it, but that it was the cocaine, and nothing but the cocaine, that I must credit with the alteration. However, before venturing to publish the case, I decided to wait for an opportunity of further testing this supposed power of the drug, and luckily, I had not long to wait; for in a couple of month's time I had a case which I felt would prove to be a severe test for the experiment.

Case 2.—This patient also was a primapara, but one over 40 years of age. The os was obstinately rigid, the pains very strong and frequent; there was a suspicion of approaching exhaustion, and also much despondency on the part of the woman at the slow progress she was making—for she had been in labor nearly 3 days. After waiting

nearly this length of time to give nature every chance, I applied the solution of cocaine, but not, I must confess, without some degree of "fear and trembling," as to whether the result would confirm my ardent wishes, or leave me disappointed. But lo, and behold! in four minutes' time the os yielded, and, as in the former case, was now so distensible that I was easily enabled to slip it over the head of the child, and complete the delivery in due course. After this I felt there could be no question as to what had brought about this sudden and striking change in the physical condition of the os. Surely it could not simply be an accident of time—a coincidence merely, but rather the direct result of an applied and active cause, this being the application of the cocaine, and nothing but the cocaine. The author reports three additional cases in all of which the method was equally successful.

Utero-Intestinal Fistula.

Neugebauer has issued valuable tables of 28 cases of utero-intestinal fistula (Epitome British Medical Journal, Dec. 10, 1898).

In 12 the fistula was not detected till after death; in 21 the patients were pregnant or recently delivered. In 11 of these cases the fistula was due to retained fœtus, "missed labor." In 1 very unusual case the patient had yellow fever in the fourth month of pregnancy. The vomiting set up abortion, followed by fatal peritonitis. A communication 4 inches wide was found between the intestine and the utero-vaginal canal (*Rheinische Monatschrift fur praktisch Aerzte*, 1850, p. 574). In 9 the fistula occurred from injuries at delivery, or puerperal complications. Thus in 2 cases the injury was due to the forceps, in 1 to version, in 1 to manual detachment of the placenta; 3 other cases are indefinite in this respect, but apparently some injury during labor explains them. There remain 7 cases where the patients were not pregnant but recently delivered. Two were purely teratological in newborn children. In two the fistula was caused by rupture of a hæmatometra into the rectum, in 2 by evacuation of pus from a suppurating myoma, in 1 from precisely the same condition there being also tuberculosis of the intestine. As to the part of the intestinal canal involved, the communication of the uterine cavity was with the stomach in 2 cases, the rectum in 9, the sigmoid flexure in 3, the transverse colon in 1, some part of the large intestine not specified in 2, and the small intestine in 12. This series includes some repetitions, as in 1 case there was a fistula involving the small intestine and the sigmoid flexure, in 1 there were three small intestinal fistulæ, and in 1 as many as three rectal fistulæ; there was also a double case of this type not clearly defined.

More distinctly the individual 28 cases are thus classified: Utero-gastric fistula, 2; utero-intestinal (small), 11; utero-colic, or utero-rectal, 14; unspecified case 1. No fewer than 14 of the 28 died. Of the 14 recoveries, spontaneous closure occurred in 11. This seems the rule when the fœtal relics are evacuated in "missed labors." In one forceps-injury case the fistula did not close for years. In 1 case the os externum was closed by sutures after paring of its edges, so that the catamenia drained into the intestine. Resection of the fistulous portion of intestine was successfully performed in 2 cases through an abdominal incision; in 1 case abdominal section was undertaken in order to remove a fœtus, retained in the uterus which was incompletely ruptured. Fæces and ascarides had issued from the uterus, which communicated at the fundus with the small intestine. The patient died. In another fatal laparotomy the uterus and intestine were separated and the fistulæ closed by suture. Resection of the intestine would, it was admitted, have been safer. Nine died, unoperated upon, by exhaustion and pyæmia; 2 from tuberculosis; 1 from yellow fever. The 2 teratological cases were naturally fatal. Treatment answers better than operation, considering the circumstances under which utero-intestinal fistula is usually seen. Removal of the source of irritation—generally retained fœtal bones—ensures cure. The 2 cases of operation for closure of the bowel from the original aspect proved failures.

Quinin in Malarial Fever.

Dr. Robert Koch having had the temerity to declare that the "black-water fever" of South Africa is really "quinin poisoning," has most effectually injured the reputation of quinin, at least in the minds of the laity in South African territory, and has thereby occasioned a heated discussion in British medical journals and societies. Dr. Koch's opinion is not excepted by the English physicians who are resident in South Africa, and they vehemently protest that it is superficial and fallacious, arguing with liberal references to long experiences, which show that black-water fever patients recover quickly if treated promptly with heroic doses of quinin—that, in the words of Dr. R. U. Moffat of Uganda (British Medical Journal, Sept. 24, 1898), "there is only one treatment for malaria: quinin, more quinin, and yet more quinin."—Am. Therapist, November.

The Operative Treatment of Cancer of the Breast.

In a recently delivered clinical lecture on Halsted's operation for the removal of cancer of the breast, Butlin (The Hospital, Dec. 10, 1898) speaks very highly of that proceeding, which, since the year 1895, he has made his routine proceeding. It should be noted that the researches of Heidenhain and Stiles have shown that cancer of the breast spreads rapidly backwards towards, and then into, the pectoral fascia, even when there appears to the naked eye to be a considerable interval between the posterior border of the tumor and the fascia. Moreover there is considerable difficulty in satisfactorily separating the fascia from the muscle, and both the investigators agree in believing that the cancer cells are so soon and so widely conveyed by the lymphatics of the breast, and especially towards the pectoral fascia, that the disease is not entirely removed by the operations usually performed. Although they differ in certain details as to the direction of distribution by the lymphatics they both agree that the whole breast should be removed. It appeared, then, to Mr. Butlin, that an operation designed to remove thoroughly all the structures in which the cancer of the breast may be disseminated would be the means of saving the lives of, at least some women affected by the disease, and that of the various operations which had been proposed, the one designed and practised by Halsted best fulfilled the requirements.

In this operation everything which is removed comes away in one continuous mass, and this mass contains the whole of the mammary gland, the whole of the pectoral muscle, with, perhaps, the exception of the clavicular portion, the fascia beneath the pectoral muscle and that in front of and bebind the lesser pectoral, the loose connective tissue on the side and back walls of the axilla, the fat and all which it contains right up to the clavicle. This operation is, of course, a serious one, but if care is taken to lessen the hemorrhage by operating deliberately and taking up every vessel as soon as, or even before it bleeds, it is not more dangerous than any other large operation for the same disease. Between the beginning of 1895 and the end of 1897 Mr. Butlin has performed it 33 times with but one death.

Now as to results. Taking those that have been done three years and over, there are thirteen cases only to consider, and, of these, nine were alive and well when last seen or heard of (from their medical men) at periods of from three to four years after the operation. In more than one of the successful cases the glands in the axilla were cancerous.

In none of the cases did he remove the supraclavicular glands for he is inclined to agree with Cheyne in thinking that cases in which these are affected are hopeless. But on that point he reserves his opinion. Mr. Butlin says that he is not so sanguine as to believe that surgeons are going to cure every case of cancer of the breast at some not far distant time, but he does believe that far better results will be secured in the future than we have been accustomed to in the past; and if the results given by Mr. Watson Cheyne and by Prof. Halsted are added to those which he now describes, it will be found that out of forty-two patients treated by the three operators, more than three years ago twenty-three are still alive and well, or have died of some other cause than cancer after passing the three year's limit. "And these results have been secured under the most disheartening circumstances. There is hardly a single case in which the disease was not known to have existed for several months, and in many of them it had been noted for one, two, or more years. There were several of them in which the primary tumour was ulcerated, and several in which the axillary glands were filled with cancer."

We think that these results should be taken note of, for if once the general practitioner gets rid of the pessimism with which the whole subject was overlain a few years ago, and, indeed, still is in the minds of many men, cases will be sent up for operation at a far earlier date than has hitherto been the case, and the results may thus become proportionally better.

Appendicitis during Pregnancy.

Bouillier, in the British Medical Journal Dec. 10, 1898, discusses this subject on a basis of 22 observations, considering (1) the influence of pregnancy on appendicitis. (2) the influence of appendicitis on pregnancy. As to the first point he concludes that pregnancy plays no part as an etiological factor in the causation of appendicitis. The pregnant woman is not more subject to this form of inflammation than the non-pregnant. The influence of appendicitis on pregnancy is, on the other hand, well marked. In 7 out of the 22 cases abortion at about the fourth month resulted, either before or after surgical treatment. Spontaneous abortion may be due either to the febrile condition and the affection of the general health, or to infection of the pelvic organs from the appendix; possibly to both factors. The mortality in the 22 cases was: Maternal,

30.4 per cent.; fœtal, 47.8 per cent.; consequently pregnancy renders the prognosis of appendicitis more serious. The treatment is that of appendicitis, the pregnancy not constituting a contraindication. Early intervention is desirable, since if the case be left there is a grave danger of puerperal complications due to general infection or to direct infection of the pelvic organs.

Tuberculosis and the Milk Supply.

Delephine, (The Lancet of Sept., 17, 1898,) states that healthy cowsheds, well lighted and ventilated, easily cleaned, arranged so as to separate the animals as completely as possible from each other and to prevent the food and litter of one from being contaminated by others, Good water-supply. After discovery of a tuberculous animal, thorough disinfection of its stall, and if possible of the whole shed. Isolation sheds of the same kind for cattle found to be affected with a moderate or slight degree of tuberculosis. Stalls well isolated from the others might be provided in this shed for animals which have not been tested and have to be kept in quarantine until tested, or better still, a special testing shed frequently disinfected might be provided. Immediate slaughter of all cows in advanced state of tuberculosis. Fattening of cows with moderate tuberculosis, these cows not to be allowed to come again at any time in contact with the healthy ones. Any dairy produce from these tuberculous cows to be sterilized. If butter be made the cream should be treated for some time at 85 deg. which does not interfere with the making of good butter (Bang). Tuberculous cows should, however, be fattened as soon as possible and their milk used for as short a time as possible. Tuberculous cows with tuberculous udders are usually in a state of advanced tuberculous, but in many cases a cow with tuberculous udder should be slaughtered at once. All calves to be fed from the first on sterilized milk. The thoroughly sterilized milk of tuberculous cows might be used for this purpose. To avoid the other sources of deterioration which the author has mentioned: The udder and milkers' hands should be kept absolutely clean The milk cans or pails should be washed with boiling water or sterilized by steam. This milk should be cooled immediately after being milked and its temperature kept below 40 deg. F. until it is treated in the dairy (by filtration separation, sterilization, etc.) Milk which has not been sterilized and which has to be sent by rail from the dairy to a distance should be kept by packing in ice or otherwise at a temperature below 40 deg. F., if possible, until it reaches the consumer. The same precautions with regard to cooling apply to all milk which cannot be consumed within a few hours—say eight or ten hours at the most—from the time of milking. The authorities should be asked to regulate the importation of foreign milk and dairy produce with a view to insure that the precautions above mentioned have been duly taken to insure the wholesomeness of these products. The authorities should be asked to find the means to prosecute and punish adequately all kinds of neglect rendering milk dangerous to health, so as to place the farms and dairies where proper precautions are taken on a fair footing in the general competition.

A Good Rule for the Country Doctor.

It is often the source of much worry and bother after we have been ten miles in the country to see a patient, and leave directions for their welfare, and instructions for a report on the following day as to how he is progressing and the results obtained from the medicine given.

The next day comes and John is told to saddle old Kate (a mule that John has ridden since his first experience on horse-back) and go down to town and tell Dr. Solomon how your pa is to-day. John has not been in the room an hour altogether since the doctor was there, and is supposed to know exactly how his father is, and does not realize that he knows less than nothing about his father's condition until the doctor begins asking him questions concerning his father. Then to the embarrassment of John and worry of the doctor, they both find that the old mule made the trip for no purpose, for the doctor has to go back to see how to make his prognosis. Whose fault is it that such things occur? It is not the boy's, for a boy never thinks; it is not the nurse's that have just been installed, for they don't know what you ought to know. So we will have to lay a good part of the blame to ourselves.

A good rule to follow when you expect a report the next day, is to outline such symptoms as you most desire watched and reported on, and you will be much pleased with the results.

By instructing the family about such actions as you expect from the medicine, you will often save them alarm and yourself a midnight ride.

No one can appreciate an intelligent report of their patient's condition until he is worn from long rides and loss of sleep, then he will readily talk to the family, and have

his list of questions to be answered before the messenger leaves home.

J. R. Gilbert, M. D.

Ranger, Texas.

The Value of Casts in the Prognosis of Albuminuria.

According to L. Bard the persistence of albumen in the urine, after an attack of parenchymatous nephritis, is compatible with a complete substance of the inflammatory process in the kidney. (Medicine, January, 1899).

In parenchymatous nephritis the most pronounced degenerative changes are in the epithelial cells of the tubules. If the inflammation subsides, the cells may be restored to their normal condition. However, if the newely formed cells are imperfectly regenerated, the lining of the tubules may resemble somewhat scar tissue, and perfect physiological activity of the kidney is not to be expected. An analogous pathological condition results from superficial burns of the skin; the thin epidermis that is regenerated is never capable of the normal function of the skin. Kidneys the seat of the cicatricial changes described may secrete albumen in the urine, and the author designates the affection as "albuminurie cicatricielle." The prognosis is usually good, since the albuminuria is not dependent directly on an inflammatory process.

A careful study of casts found in the urine aids one materially in differentiating cicatricial albuminuria from parenchymatous nephritis, and in judging the severity and prognosis of the last named affection. Granular casts arise from the débris of degenerated epithelial cells of the urinary tubules and vary with the intensity of the process. In severe inflammation, owing to the increased proliferation and destruction of the epithelial cells, the casts are consistent and opaque. As the inflammation subsides the débris is correspondingly diminished, and the casts becomes clearer and more or less transparent. In many cases, especially when the inflammatory process is not severe, epithelial cells that are not wholly degenerated and still show their contour are found adherent to the casts. The diameter of the casts corresponds to that of the tubule from which it arises, and increases with the severity and age of the process,

After the inflammation subsides, and if the epithelium of the affected urinary tubules is regenerated in the imperfect manner described, resulting in the formation of scar-like tissue, the urine may contain albumen. Casts may also be present, but they will be of the hyaline and not of the epithelial variety.

Amorphous, waxy, or colloid casts are seldom found in pure parenchymatous nephritis, but are more likely to appear when the process is combined with sclerosis or secondary atrophy of the kidney. Real epithelial casts—*i. e.*, those made up of mosaic-like, well preserved epithelial cells —are very seldom found in parenchymatous nephritis. They occur most frequently in toxic nephritis and signify desquamation without real inflammatory changes in the epithelium. The author's recorded observations deal with parenchymatous nephritis only.

The author concludes, then, that if albuminuria persists after the subsidence of a real parenchymatous nephritis, and repeated examination fails to reveal the presence of granular or colloid casts, one is justified in assuming that the inflammatory process has disappeared and that the albuminuria has its source in the cicatricial condition of the epithelial cells of the tubules. The number, size, consistence, and character of the casts reveal very closely the intensity of the existing process. although the conclusions drawn from such evidence may not appear to correspond, at that time, to the clinical symptoms.

The Diagnosis of Nephritis without Albuminuria.

Dr. Arthur R. Edwards (Amer. Journal Med. Science, Oct. 1898,) concludes a paper on this subject as follows:

Carefully repeated routine chemical and microscopical examination of the urine every twenty-four hours usually, but not invariably, detects acute and chronic nephritis. The diagnosis of the albuminuric and non-albuminuric types of nephritis is aided by searching examination of other viscera and parts, e. g., by a disturbance of cardio-vascular changes, retinal involvement, etc. These visceral or somatic changes usually present in nephritis may be lacking in concrete instances, or be capable of other or divers interpretation, as atheroma, etc. The urinary findings most essential to the diagnosis of nephritis may be lacking, as well as many other signs and symptoms of minor dignity. Nephritis may be unattended by albuminuria. Such nephritis is usually interstitial in type. While certain instances of non-albuminuric nephritis correspond to the type described by D.D.Stewart, yet non-albuminuric nephritis may not exactly correspond to the said type,since acute nephritis, chronic parenchymatous nephritis, and chronic intestinal nephritis may occasionally occur without albuminuria. Casts

should always be searched for; they are more constantly found than is albumin, yet seem, in certain instances, to betoken renal degeneration rather than inflammation. They are not invariable in nephritis, nor are they invariably nephritic. Future clinical caution and pathological examinations will probably increase the number of cases of non-albuminuric renal inflammations of acute, subacute, and chronic types. Non-albuminuric nephritis is of special importance in life insurance and kindred examinations, and in practice, since prophylactic measures may be instituted, and the prognosis obviously influenced.

Remarks on Exophthalmic Goitre.

At the New York County Medical Society, Dec. 19, 1898, Dr. J. Herbert Claiborne read a paper with this title. (Med. Record, January 9, 1899).

He said that three most prominent and constant symptoms were acceleration of the heart's action, exophthalmos, and goitre, and yet it was claimed that both the exophthalmos and the goitre might be lacking. The disease had been described as an atonic condition of the vasomotor centres of the vagus and spinal accessory nerves. The theory that exophthalmic goitre was due to a derangement in the cervical sympathetic was probably the most generally accepted one. It had been maintained that the lesion in the cervical sympathetic produced a dilatation of the vessels of the thyroid, and those designed for the postbulbar tissues, by a paralysis of the vasomotor nerves of these regions, and that at the same time the constant irritation of the vagus and spinal accessory interferred with the proper inhibition of the heart. In other words, one set of symptoms was explained on the ground of an actual lesion, and the other set by an irritation, which was obviously unsatisfactory. A lesion of the vagus would result in an opposite effect on the heart, i. e., a slowing of its action. Moreover, the cilio-spinal centre would be affected. and there would be certain pupillary symptoms. As such symptoms were not present, this fact seemed to exclude the sympathetic system. Autopsies on certain cases of exophthalmic goitre showed changes in a few instances, but in only a few. Reference was then made to certain other theories that had been propounded to explain the causation of this disease. In this disease there was a lack of association between the upper eyelid and the movement of the cornea in looking downward. This was known as "the Graefe symptom," and had been considered absolutely pathognomonic of exophthalmic goitre. When "Stellwag's symptom" was present, the patient had the appearance of a frightened stag. This was probably due to the retraction of the lids. It was more properly called "Dalrymple's symptom," as the former was really applied to an infrequency of nictitation. The "Fiske-Bryson symptom" was a diminished power in expansion of the chest. Observers were quite generally agreed on the constancy of this symptom. If the Graefe symptom was associated with tachycardia and dilatation of the thyroid, the diagnosis was no longer in doubt. The cause of the exophthalmos had not yet been determined; it was still attributed to the muscle of Muller, which was said to be under the control of the sympathetic. He had noticed that there was generally a set expression of the muscles of the face, and he believed that exophthalmos and retraction of the lids were partly the result of a lack of proper action of the orbicularis. The headache quite frequently present in this disease could often be removed by the correction of the slight degree of hypermetropia present. He did not believe that the muscle of Muller was a factor. The course of the disease was generally slow, and he did not believe that any patients recovered completely. The duration of a recoverable case had been stated to be two or three years, but many patients died of some intercurrent disease, while in others the disease remained stationary. Post-mortem examinations on cases of exophthalmic goitre had been singularly barren of results. The death-blow to the thyroid theory of exophthalmic goitre was to be found in the fact that all of the symptoms may exist without enlargement of the thyroid. The treatment of exophthalmic goitre was necessarily the treatment of its symptoms.

Auto-intoxication in Epilepsy.

Solaro in a synthetic review of recent opinions on this question, says the British Medical Journal, finds probable evidence of auto-intoxication in the phenomena of the aura, in the supervention of dementia, in the dyspeptic disorders which often precede an attack of epilepsy, for example, vomiting, fœtor of breath, constipation, diarrhœa, slight icterus, etc. So also the sphygmographic changes observed in blood tension before and during an attack may be referred to toxic influences. The toxicity of the urine was found by Voisin and Petit to be less during the attack and greater after. Krainsky found that for one or two days before an attack the elimination of uric acid in the urine was lessened, whilst immediately after an attack it was increased.

This was so constant a phenomenon that attacks could be predicted or diagnosed afterwards from the examination of the urine with regard to the uric acid. The actual substance causing the attack, according to Krainsky, is carbaminate of ammonia. Indican and acetone have also been suggested as epileptogenic poisons. The serum of the blood of epileptics has a strong toxic action during the attacks. Treatment addressed to the eliminating organs, to the digestive tract, receives fresh sanction on the view that auto-intoxication plays no inconsiderable part in the production of the epileptic attack. The *role* of the bromides in calming the cerebral irritability is in no way lessened by laying stress upon the importance of getting rid of toxic substances in the organism.

Diet in Hyperacidity.

Many efforts have been made recently to throw light upon various stomach diseases by an investigation into gastric chemistry. The main object of these researches, says the British Medical Journal, August 13th, 1898, has been to evolve through a better understanding of the diseases themselves a more satisfactory and rational treatment, both dietetic and other. It is only too patent that the labelling of a case as dyspepsia only brings one to the threshold of the inquiry, as this term should signify nothing more than a symptom complex caused by gastric disease. It is equally clear that the treatment, dietetic or other, must be haphazard if the efficiency with which the stomach discharges its functions in the case in question is unknown. Notwithstanding this, the methods of investigating gastric chemistry have found little favour in this country, and therefore it is more than probable that cases of hyperacidity are passed by unnoticed. Almost *pari passu* with the above-named researches and in some sense dependent upon them, much investigation has been made into the general metabolism of the body. By ascertaining the input, and carefully comparing it with the output, it becomes possible to find out to what extent the various constituents of the food are utilised by the body. To such an extent has this subject been advanced, that in not a few clinics abroad the investigation of metabolism is looked upon as almost a routine necessity in certain cases.

At any rate it is obvious that if the functions of the stomach both secretory and motor be known, and the methods of treatment dietetic and other be carefully controlled by an investigation into the metabolism of the body, some valuable information should be forthcoming. H. Strauss and L. Aldor have made such a research in regard to diet in hyperacidity due to the excess of free hydrochloric acid. Some have thought that a diet chiefly nitrogenous was indicated, but on the other hand this diet irritates the stomach and should thus aggravate the disease. Other well-known physicians have even advocated the presence of a considerable amount of carbohydrates in the dietary. Against this view must be placed the fact that a relatively rich deposit of starchy material is found in the contents of the stomach obtained after the test meal given to those suffering from hyperacidity. Strauss and Aldor believe that the problem is to be solved by reducing the carbohydrates, while at the same time providing sufficiency of substances free from nitrogen. The replacement of ordinary starchy food stuffs by those in solution will not satisfy the requirements. The damage done to the total metebolism in hyperacidity is well recognized and is evidenced by the deficient nutrition of such patients.

The author maintain that the desired end may be attained by introducing an abundant amount of fat into the diet. Dr. Strauss undertook a series of investigations upon patients suffering from various stomach affections, by which he was able to show that in the majority of cases the addition of a certain amount of oil to the dietary was followed by a diminution both in the total acidity as well as in the acidity due to free hydrochloric acid. It has been stated that fat impairs the motor functions and absorptive powers of the stomach, but even if this were to some extent correct, the patient is nevertheless thus provided with a qurntity of combustible material which is only otherwise supplied with much difficulty. Having thus satisfied themselves on these points, the authors proceeded to test how far it would be possible to substitute fat for carbohydrates, and at the same time to maintain a rational mixture of nitrogenous and non-nitrogenous food stuffs. They made five investigation into 4 cases of hyperchlorhydria. The observations extended over five to eight days, during which period abundant fatty matters (125.5 g. in two and nearly 160 g. in three investigations) were added to the dietary, and the metabolism was most minutely investigated.

The subjective condition of the patients, as well as the functions of the stomach, were also carefully noted. The tables appended in Strauss and Aldor's article show that the utilisation of both fatty and nitrogenous matters was extremely good. The patient's weight remained constant, or in-

creased. The use of abundant fatty matters produced no unpleasant effects. for only in one case were there any dyspeptic symptoms, and these were very fleeting. The authors claim to have established the fact that in gastric hyperacidity there is a considerable toleration of fatty matters, and that if it is desired to improve the patient's nutrition fats must occupy a considerable place in the diet sheet. The fat used was obtained from milk, butter, cream, and oil; cream is especially to be recommended. A portion of the carbohydrates required should be supplied in a state of solution, but on the other hand attention is drawn to the fact proved by Strauss himself that oatmeal soup very quickly leaves the stomach of those suffering from considerable motor insufficiency both when the secretion of hydrochloric acid is normal and when it is increased.

The subject is obviously one which deserves considerable attention, and if the investigations of Drs. Strauss and Aldor, most carefully devised and carried out, are confirmed by more extended clinical trials, these authors will have advanced our knowledge of the dietetic treatment of disease,and will further have shown the value of scientific research applied to the treatment of disease.

Fear Neurosis.

Dr. Morton Prince (Boston Medical and Surgical Journal for December 22d) claims that this is a distinct neurosis, and that it has never as yet been described. The reason why this neurosis has been overlooked is because it has been regarded merely as a manifestation of timidity. But, while it is quite true that it arises from timidity, or self-consciousness, yet it persists long after all timidity has passed away as an automatic affection. While the symptoms are the natural physical manifestations of fear, they are not accompanied by this emotion. The condition exists apart from any psychical state as a group of pure physical symptoms.

At first there is a natural or excessive timidity. In this timid condition certain environments excite fear and its accompaniments, such as tremor, palpitation, faintness, etc. By constant repitition of this excitement, these symptoms become welded together into an automatic process, which persists as habit neurosis. This must be regarded as a sort of degeneration of nervous process by which associated actions become grouped together. This is a process by which certain arts are learned, as violin playing, etc., and certain morbid states are developed, as some of the neuroses and psychoses.

After the condition of this neurosis has been well developed the exciting cause of any individual attack is some primary suggestion in the form of apprehension, or expectation that these symptoms will repeat themselves. To this there is usually added the direct excitant of making some public appearance.

There is a feeling of being watched, faintness, perspiration, flushing of the face, confusion of thought, depression, a sense of indigestion, a feeling of goneness, an ataxic feeling in hands and feet, dryness in the throat, coldness in the hands.

These feelings and symptoms become so organized that the fear of their recurrence renders it impossible for some singers, musicians and public performers to appear before an audience. The thought that they are going to perform will bring on the whole train of symptoms, and render them unable to go on with their practice.

These symptoms may complicate a true condition of neurasthenia, but may exist by themselves as an independent neurosis. The symptoms are often of such intensity as to be a matter of considerable suffering. They come on with such suddenness as not to allow for thought. At a time when the person is lecturing, playing, practising, or so on, these feelings come on with a rush. To continue with the performance under these conditions calls for the utmost exercise of will power, and this in turn is very exhausting.

The knowledge of the possible return of these symptoms at some critical moment depresses the person. This intensified the neurosis. Actual suffering results from this in the form that the persons thinks they are regarded as timid when they are really not so.

Auto-intoxication and Albuminuria.

Praetorius (Bermingham Medical Review) thinks it impossible to deny that there are cases of functional albuminuria, cases in which there is no organic disease of the kidneys. This is especially the case in so-called cyclical albuminuria, where the albuminuria is present in the morning, and disappears as the day goes on. He quotes a case associated with enlarged liver which proved to be due to hydatids, and disappeared after this had been cured by incision and drainage. But he contends that the main cause of functional albuminuria is auto-intoxication, either gastric, or intestinal, or hepatic,or,as in the albuminuria of myxœdema, from the thyroid glands; or from some deranged tissue metamorphosis, such as occurs in gout, diabetes, and obesity.

Laryngeal Hemorrhage.

Geyer, (Journal of Laryngology) refers to the different causes of laryngeal hæmorrhages, injuries, ulcers, anomalies of the blood, vicarious menstruation, overstraining of the voice in singers, catarrh, laryngitis sicca. The hæmorrhage may be external and vary from a few drops to a fatal quantity, or it may be submucous. He describes two cases with hæmorrhagic tumors.

1. A woman forty years old, with good family history, had enjoyed good health. Two years ago she had hæmorrhage from the uterus, which was cured after curetting and removal of a placenta polypus. For seven weeks the patient had hawked clear fluid blood, varying up to a cupful in twenty-four hours. Slight cough. Great weakness. Hoarseness for two days. Menstruation normal.

Examination showed, slightly under the petiolus, a sessile tumour the size of a currant, surface smooth and covered with fresh blood, colour bluish red. The tumour was firmly situated, and could be slightly moved with the probe. Diagnosis: bleeding polypus on the lower side of the epiglottis. It was attempted to produce shrinking of the tumour by applying trichloracetic acid. This caused severe dyspnœa for two hours, which nearly necessitated tracheotomy. After twenty-four hours the dyspnœa passed off.

As it was considered advisable to repeat the treatment, and as removal through the mouth might lead to severe hæmorrhage, it was decided to operate with an external incision. After a previous tracheotomy on April 29th, Dr. Ebenau performed subhyoid pharyngotomy and removed the tumor with a sharp spoon. The base was cauterized with trichloracetic acid. The hæmorrhage ceased after removal of the tumour, but returned after a few days. The laryngoscope showed a new tumour the size of a pea. Then it was no longer doubtful that it consisted, not of a tumour, but of a blood coagulum, which was confirmed by the microscope. Large hæmorrhage, with necrosis of the superficial layer and infiltration of leucocytes. After removal of the blood coagulum now under the petiolus, a bleeding vein was seen, which was closed by repeated cauterization. Nine months after the operation there has been no more hæmorrhage.

2. Woman, forty-eight years old, suffered from intermittent severe hoarseness, tickling in the throat, and shortness of breath on exertion. The laryngoscope showed the presence of a tumour anteriorly in the glottis, the size of a hazel nut: colour, pale red; surface uneven; of pretty hard consistence. The tumour had a broad basis, and was situated on the anterior end of the left vocal cord. It had the appearance of a fibroma. It was removed with the snare. The microscope showed it to be not much altered laryngeal tissue, with an old hæmorrhage under the mucous membrane. It was mostly organized with enlarged thin-walled vessels, containing partly hyaline amorphous and partly thready exudation. There was abundant pigment in the endothelial cells. Six months after the operation there were very small stippling-like red points, which looked like granulations, at the situation of the tumor. Vocal cords were white; voice clear. Blood has not been coughed up since the operation.

The author refers to a similar case published by Semon in Vol. IV., p. 418, of Fraenkel's "Archives," which was at first supposed to be malignant. He points out the importance of the differential diagnosis between these and cancer, and emphasizes the importance of free movement of the cord in the former.

Diet for Surgical Cases.

At the New York County Medical Association, Dec. 19, 1898, Dr. Wyeth said that there was a careful system of dieting employed, which he considered extremely important in all surgical cases. (Medical Record, January 7, 1899). It was just as important, in his opinion, to eliminate septic poisonous gases and ptomaines from the bowel as it was to supply suitable nourishment to the system. At intervals of about one week the patient was given the small calomel-and-soda triturate tablets up to one or two grains. One or two teaspoonfuls of Carlsbad salt in hot water were given in the morning of the day of operation, to secure a thorough emptying of the intestine. The nourishment should be administered in moderate quantity three times daily. He did not advocate a limited and soft dies; surgical patients could often digest a small quantity of beef, chicken, or quail better than broths. In the way of meats, he would give sirloin or tenderloin steak, roast beef, roast mutton, mutton chop, or stewed chicken. Goose, bacon, or fat of any kind should be forbidden. Eggs should be given sparingly. The yolk contributed to the formation of gases in the alimentary canal, and consequently, if the yolk was given at all, the yolk of one egg should be added to the whites of two or three eggs, and the eggs shirred. Shredded wheat, the crust of a roll, and fresh butter in moderate quanti-

ty might also be allowed. All uncooked vegetables were strictly forbidden. Beans, peas, and carrots, cooked slowly, asparagus, and sweet potatoes in moderate quantity were chiefly relied upon. The white or Irish potato was not so satisfactory. When given, it should be boiled, thoroughly mashed, mixed with cream, and then baked. Fruits were very rarely permissible.

Christian Scientists.

The christian scientists, says the Medical Record, do not have it all their own way in Ohio, an attempted manslaughter by victims of that particular psychosis has recently received a slight check in Cincinnati. A certain Harriet Evans, who non-treated a man with typhoid fever so successfully that he died, was convicted on December 8th of practising medicine illegally, and was fined $100. Another "scientist," named Allie Putnam, met the same fate on December 21st. The person had non-treated a man with alleged gastric disorder, and had demanded and received a fee for her inaction. This second conviction has excited the other illegal malpractitioners, and a fund has been raised to carry Putnam's case to a higher court. A wealthy victim of the delusion is said to have given $10,000 to meet the expenses of the appeal, and the trustees of the Christian Science church say that the building fund of $24,000 is available for the same purpose. They say they will make this a test case and will fight it through all the courts if necessary, even up to the supreme court of the United States.

Spinal Meningitis Complicating Measles.

Starck describes the case of a girl, 8 years of age, who had a typical attack of measles, and on the second day of the eruption she complained of great pain on movement. (British Med. Journal.) The nurse found it impossible to turn the patient on her side, because of the extreme tenderness. All movements of the legs and arms were followed by muscular spasms. The skin over the legs and arms was hyperæsthetic. the neck was stiff, and the head slightly retracted. The temperature was 101 deg. F. On the same evening there was retention of urine, which lasted several days. On the fifth day of the nervous symptoms the patient was able to pass urine, but considerable pain was experienced in doing so. On the seventh day the arms were free from pain, the legs were still attacked with painful spasms when touched. In a fortnight the child was able to walk a short distance alone; the legs were still stiff but not painful. The knee-jerk was exaggerated. Micturition was painful, and the bowels only acted after purgatives. Ultimately the patient made a good recovery. Measles seemed to be the only possible cause of this condition; all other diseases were carefully excluded, and the child's previous health had been excellent. The cranial nerves and brain were unaffected. The author says that scarlet fever and typhoid are more often followed by lesions of the spinal cord; he has not been able to discover a case similar to the present one after an exhaustive examination of the complications and sequelæ of measles.

Automatic Pressure Regulator.

Compressed air having become an important factor in up to date treatment in respiratory and aural affections, all practical improvements in air compressing apparatus are readily appreciated by every progressive physician. The Globe Manufacturing Co., of Battle Creek, Mich., have devoted much time to this work, and have recently brought out a number of valuable improvements in air compressors, receivers, etc.

Their new Automatic Pressure Regulator is being received with much favor. It can be attached to any air receiver, which may then be stored at high pressure which is automatically reduced to any desired extent to suit the work in hand, thus securing uniform results, with an economical expenditure of air. This ingenious device is so arranged that at any time both the high and reduced pressure can be read from a single gauge.

The Globe Automatic Cut Off, made by the same company, has many new and attractive features. If further information is desired, write the manufacturers for descriptive circulars.

Drainage in Suppurative Appendicitis.

A. McLean (Medical Age,) concludes that: Where pus is present, tubing should be used, for gauze will not free a cavity of pus. Where inflammatory transudate or exudate is present gauze proves the most satisfactory. Where gauze drainage is used in the peritoneal cavity the external end should be lower than the internal, allowing much freer action. Mixed drainage is to be recommended where septic peritonitis accompanies suppurative appendicitis. Drainage should be dispensed with as soon as possible, and the external wound allowed to unite, for the sooner the union the better, and the chances of a ventral hernia following are less.

Longevity In Spain.

According to Dr. F. Olóriz, Professor of Descriptive Anatomy in the Medical Faculty of Madrid, it may be estimated that the proportion of centenarians at the present day for the Peninsula and the adjacent islands is 25 per million (British Medical Journal, Dec. 24, '98). The ratio in 1857 was 12, in 1860 13.97, and in 1877 29.87. In the census of 1887 the proportion had fallen to 23.39. On the whole, however, the proportion of centenarians to population in Spain has notably increased during the last century; while the total population has not quite doubled, the proportion of centenarians has trebled. The distribution of centenarians in the different provinces of Spain is very unequal. Malaga, Almeria, Murcia, Cadiz, Seville, Granada, and in general the Andalusian provinces stand at the head of the list; in Malaga,for instance, the proportion rises to something over 100 per million. The second place is occupied by the Galician provinces, the others following with slight differences till the bottom is reached in the provinces of Alava, Soria, and Teruel, in which not a single case of centenarianism is registered. Professor Olóriz concludes that, generally speaking, in the southern zone of Spain, from Sierra Morena to the coast, including the Spanish African Colonies and the Canary Islands, the proportion of centenarians is approximately from 50 to 60 per million of population; in the north-eastern region proportion averages from 35 to 40, becoming much less in the Cantabrian zone, from west to east; it hardly reaches 15 in the valleys of the Tagus and the Guadiana; it falls to 7 in those of the Ebro, with the Eastern Mediterranean slopes, in spite of the relative abundance of centenarians in the city of Barcelona; and to less than 5 per million in the valley of the Douro. To sum up, extreme longevity is exceptional in the central regions of the Peninsula; it increases towards the maritime regions, especially in the south, and it reaches its maximum on the two sides of the Straits of Gibraltar. The proportion of sexagenarians in the same regions varies, but in a manner altogether different. For instance, while the proportion of persons of 60 years of age is 7 per cent. in the North-east, the Cantabrian regions, Catalonia, and the Balearic Isles, it is 6½ in the valley of the Ebro, about 6 on the East Coast, and in the two Castilles, and falls to 5½ in Andalusia, especially on the sea coast. Comparing this geographical distribution with that of the centenarians, Professor Olóriz concludes that in the north extreme and ordinary longevity coincide; in the centre the latter is moderate, and the former exceptional, but in the south the proportions are inverted, as if the hot climate of Andalusia used up the energy of the human frame more rapidly in average members of the race, while being more favorable in prolonging life to an extreme degree in the exceptional individuals who live beyond the seventh decade. Professor Olóriz is careful to guard against drawing positive conclusions as to the effect of climate in the production of extreme longevity, but he thinks it probable that the sea coast, with slight variations of temperature, is more favourable thereto than inland and variable climates. From his investigations he thinks himself warranted in stating that centenarianism is in Spain relatively more common in women than in men, in celibates than in the married, and in the illiterate than in persons of education.

Moles.

Dr. T. C. Gilchrist, in a paper read before the American Dermatological Association, said that according to the leading pathologists,molesare incomplete sarcomata —growths from the wall of either the lymphatics or the blood-vessels. Unna stands alone in saying that the structure of a mole is derived from the epidermis, and, therefore, is of epithelial origin. Gilchrist said that he had excised a pigment mole from the abdomen of a child, and several from adults. The mole from the child showed nests of cells in the epidermis. His own observations, therefore, confirmed the view held by Unna. From this it follows that, since the cells of the tissue forming the mole are of epidermal origin, the malignant growth of such a tissue must be carcinoma. In this view Dr. Welch concurs. It must be borne in mind, then, that the malignant growth of a mole is not a melanotic sarcoma, but a carcinoma. Dr. Abel, the author said, had recently shown that the pigment in the negro is a very complex body, and that a granule remains after isolating the pigment. This granule contains iron.

The pigment, when separated, is found to be free from iron. The conclusion is, that the pigment in melanotic growths and in the negroe's skin is not derived from the blood, but alterations in the protoplasm itself. Certain Italian observers claim that the bodies found in cancer are blastomyces and are allied to the yeast fungus, but these bodies are not constantly present, and they are found in benign growth and in many other lesions of the skin. Moreover, no pure culture has been obtained from cancer, and attempts to reproduce undoubted cancer from the supposed parasite have so far

proved unsuccessful. Dr. Gilchrist, in closing the discussion, touched on the question of prognosis. He stated that early and complete excision before the occurrence of metastasis should effect a cure. He could not understand how there could be a mixed tumour, as all the cells in a mole are of epidermal origin.

Toxi-Alimentary Dyspnœa.

Bohn, according to the British Medical Journal, has made a series of observations on the occurrence of dyspnœa under certain conditions of toxic absorption from the alimentary canal. This form of dyspnœa is intermittent, but of continual tendency. It is sometimes exclusively nocturnal, but sometimes occurs during the day as well, and when of nocturnal occurrence it is generally in the early part of the night. The dyspnœa begins as simply defect of respiration with a feeling of weight, but no pain or agony. The first symptom is liable to appear as the patient is falling asleep, or, should the attack be diurnal, it is provoked by some effort which may be apparently slight, as going upstairs, an animated conversation, or carrying something slightly too heavy. An attack presents the following features: The patient first complains of a "bar-of-iron" feeling across the chest, with sense of weakness and utter prostration. This is followed by a sensation of rigidity of the chest, so that respiratory movements seem impossible. At the same time there may be gastric convulsion, giving rise to noisy eructations followed very often by vomiting. The heart beats in an agitated manner, and respiration then takes on the characteristics of an asthmatic seizure; the face becomes pale, and cold sweats break out. The attack lasts for half an hour or more, to be followed by sanguineous expectoration. These symptoms may not be all present in the same case, for gastric eructation may be absent. Physical examination shows the presence of tachycardia and *bruit de galop*, but examination of the lungs reveals few if any physical signs. There may be intervals of long duration between the attacks. This form of dyspnœa is often accompanied by certain symptoms of an interesting character, such as pallor of the face and integuments, and *digiti mortui* and vertigo, and inefficient kidney actions. The condition, according to the writer, is one of arterial spasm with accompanying increased arterial tension, and thus it is likely to cause sclerosis of the vessels. As to the cause of this affection, and the various complications which accompany it, evidently would go to show that some alimentary defect is present, this occurring in subjects whose arterial system is in any way affected, or whose eliminating organs are defective in their action. Some temporary indiscretion of diet is liable to be followed by the absorption of some toxic material, causing an attack of dyspnœa. The writer points out that this form of seizure must not be confounded with uræmic dyspnœa, the latter being due to an endogenous form of poisoning from the retention of toxic materials produced in the organ itself. Alimentary toxæmia, on the other hand, is exogenous, and depends on poisonous materials coming from outside. It follows, therefore, that on the choice of diet will depend altogether our success in treatment. Patients with arterial sclerosis must therefore exercise particular care in diet, and should there be any tendency to dyspnœic seizures, the diet should be largely composed of milk, one suggestion being to give the patient milk diet for a week at a time, to be followed by a somewhat more liberal *menu* the following week.

The Mortality of Cancer.

Mr. Roger Williams (The Hospital, Dec, 17, 1898,) has compiled two tables which illustrate respectively the increase in the prevalence of cancer and the relative increase among males and females. The increase is not in particular parts of the body, but in all parts, and has not considerably altered the proportionate localisation ratios. In 1840 the proportion of deaths from cancer to population was 1 to 5,646; in 1896 it was 1 to 1,306; and the proportions to total deaths were respectively 1 to 129 and 1 to 22. The increase in cancer is far greater in proportion than the increase of population, and has been so steady and regular that it cannot be attributed to improved diagnosis or other casual error. The increase in mortality in males is nearly twice that of females. The writer believes that the great increase in the consumption of food, especially of meat, is one etiological factor of this increased cancer mortality. Another factor, he believes, is the greater urbanisation of the population, especially of males. Roswell Park finds evidence of a similar increase of cancer mortality in the returns of the New York State Board of Health. These returns show that in 1895 the total number of deaths from cancer was double that in 1885.

Dr. Wm. D. Bowen, of Bath, N. C., will be married, on the 19th of January, to Miss Orpah Hackney, of Wilson, N. C. We wish them uninterrupted happiness.

The Relative Importance of Flies and the Water Supply in Spreading Disease.

Dr. Veeder, of the Sanitary Club of Buffalo, Dec. 14, 1898, read a paper with this title. He said (Medical News, Dec. 31st, 1898):

From the practical sanitary standpoint, camp diseases can be divided into intestinal and malarial, the former including typhoid and yellow fever, dysentery and cholera. In camps, malaria is spread almost entirely by water, intestinal diseases almost entirely by flies. The failure of measures directed to the water-supply in the Cuban campaign, he ascribed to this fact. Even now, typhoid is rife in Manilla and Honolulu. In the recent campaign in Fashoda, although the climate was especially dry, and general conditions as to water-supply favorable, typhoid was the greatest scourge of the army. An epidemic of dysentery was cited, taken in hand when forty cases had developed with ten deaths, the disease having spread from house to house by short leaps. After adopting measures to prevent access of flies. not a single new case developed. The progress of a camp disease by short leaps, should suggest that it was borne by flies while a general dissemination should call attention to the water-supply. Fly-borne epidemics also follow the direction of the wind. In large cities, with general water-supplies, free drainage and absence of privy vaults, water is the great carrier of disease, whereas, camps, like small villages, have most to fear from flies. For this reason, typhoid is more or less prevalent at all seasons in the cities, usually only in the dry and sultry weather of early autumn in small villages.

He strongly condemned the practice of burying typhoid excrement, citing a series of little epidemics that could be traced to a nurse who had followed this method. After the nurse had herself succumbed to the disease the epidemic ceased. Typhoid bacilli will penetrate to the surface of the soil, if buried. Disinfection is necessary and, both on account of its color, its permanence after evaporation, and efficiency, copper sulphate is to be preferred. In camp, on account of the practical impossibility of diagnosing incipient typhoid, all excreta should be disinfected. The coloration of the ground would show just how far the disinfection had been successful. Volatile disinfectants are not so serviceable as non-volatile. The Government plan of furnishing large, portable, water-tight tanks for use as sinks, is good in theory but scarcely practical. The Indians avoid sickness by frequently moving their camps. Burial of feces could be relied upon to afford protection against infection by flies for a few hours. Boiling would render water safe to drink and, even against malaria, this precaution would afford almost complete immunity, as the conveyance of this disease by mosquitoes has been greatly exaggerated. Not only knowledge but discipline is necessary to protect the soldier, and sanitation under the guns of the enemy is a difficult matter.

Palatable Throat Pastilles.

We can scarcely look back, says Dr. Hitt in the Medical Council, over our childhood days, and think of the nauseating doses of medicine which were given to us, without noticing a chilly, creeping sensation running up and down our spinal column. The remedy was almost as bad as the disease. This was especially true in treating the various throat troubles of children. Their crying on account of the nauseating doses given them only added more fuel to the fire, and their throats often grew worse instead of better. Many of the tablets in which sugar of milk or licorice was used as a base were more nauseating than medicine used in liquid form, on account of having to hold them in the mouth so long. I have lately become acquainted with a very palatable and readily soluble throat pastille, in which a special Pate de Jujube is used as a base. They are manufactured in England and are known as "Allenbury's" Throat Pastilles. There are upwards of fifty varieties of these pastilles made from the formulæ of the most noted throat specialists of Great Britain.

No. 2, for instance, contains ¼ grain of ipecacuanha and is readily taken by children. No. 10, Benzoated Voice, is especially useful to public speakers and singers as a slight stimulant to the vocal organs and to remove huskiness. The No. 11, Chlorate of Potash, is a very agreeable way of giving this widely used remedy. The No. 22, Red Gum, as an astringent in relaxed throat, and No. 23, Eucalyptus (Gum 1 gr., Oil ½ min.) as an antiseptic, stimulant and astringent are very nice. No. 28, Compound Guiacum (containing Guiacum, Chlorate of Potash and Red Gum), No. 43, Menthol, 1-10 gr., and No. 29 Compound Phatany and Cocaine (Extract Phatany, gr. 2; Cocaine Hydrochlorate, gr. 1-10th) are very efficacious in diseases of the throat in which these remedies are indicated. In tonsilitis the No. 44, Menthol and Cocaine (menthol, 1-20 gr.; cocaine 1-20 gr.) is an excellent pastille. It acts as a stimulant, antiseptic and sedaive, enabling the patient to swallow with little or no pain. These pastilles have given satisfaction in a large

majority of the cases in which they have been used, and I believe they will meet with a warm reception from the physicians of America.

The Effects Produced by Anæsthetics upon the Kidneys and Circulation.

Thompson and Kemp (New York Medical Record, Sept. 3, 1898), have arrived at the following conclusions: (1) Ether appears to cause contraction of the renal arterioles producing deleterious effects upon the secreting cells similar to what obtains upon ligature of the renal artery. The quantity of urine becomes lessened and finally there is suppression. Albuminuria always develops. These results are due to a specific effect, not to any general change in the circulation. (2) Chloroform, while depressing the heart and lowering blood pressure, induces no changes in the kidneys besides slight diminution in the quantity of urine excreted, and a small amount of albumen after prolonged anæsthesia, the result, it is believed, of the concomitant failure of arterial circulation and dangerous lowering of blood pressure. (3) "A. C. E." mixture: When given with 95 per cent. of air the blood pressure falls, but the kidneys appear only affected in the same slight manner as with chloroform. If, however, given by the "closed" or "semi-closed" method, a very marked depression of the heart with fall of blood pressure take place, and the kidneys show an ether effect, that is diminution (without suppression, however) of albuminuria and damage to the secreting cells. (4) Schleich's mixture (various solutions of chloroform, sulphuric acid, petroleum ethers, benzin) produce effects upon the circulation corresponding with those of chloroform, that is, depression of the heart and fall of blood pressure, and upon the kidneys similar to those arising from ether, although not so severe, namely, diminution approaching, but without total suppression of urine, albuminuria, and damage to the secreting cells. The renal changes were more marked than with the A. C. E. mixture. (5) With nitrous oxide the effects were transient and comparable to those of asphyxia, and were not specific, but rather the results of deprivation of oxygen. Even with nitrous oxide slight albuminuria appeared. The experiments were made on dogs. The research, it is contended, shows that the A. C. E., and Schleich's mixtures possess no advantage over, and are even more dangerous than chloroform or ether, that chloroform is more harmful to the circulation than ether, that ether is distinctly more deleterious to the kidneys than is chloroform, it should not, therefore, be employed when initial renal disease exists.

Fads and Fallacies of Rectal Surgery.

L. Straus (Louisville Jour. Surg. and Med., July, 1898) makes the following objections to the Manly operation for internal hemorrhoids:

1. Cocainization of the sphincter sufficient to make the operation painless, would endanger life. 2. Complete anal dilatation is necessary; if this were done efficiently serious shock would result unless a general anesthetic were given; this is especially the case in women. 3. Complete crushing of the tunics of the tumor is tedious, painful, and dangerous. Any procedure which requires the bringing about of a condition over which we have no control is unsurgical and unscientific. Outerbridge's operation for hemorrhoids receives the following criticisms: 1. For this operation, complete paralysis of the sphincters is required; complete divulsion should not be practiced in all cases, certainly not in tubercular cases. 2. It is a long and bloody operation. 3. If union does not come by first intentio,n pus may form, and the result may be anything but satisfactory, if not absolutely dangerous, because of the increased chances of sepsis. Should the suture give way the wound must heal by granulation over a large surface.

X-Rays and Lupus.

It is reported from Vienna that Dr. Schiff has successfully treated cases of lupus vulgaris by means of the X-rays. His process, says the British Medical Journal, is to set up an independent inflammation in the lupoid area by exposing the part to a very intense radiation. So far investigation into the germicidal effects of the X-rays have gone to show that their activity in this respect is not greater than that of the ordinary light. But Dr. Schiff's result is not a germicidal one, and we know that inflammation, and even necrosis, may result from exposure in certain cases, although we do not know the determining factor which leads to injury in some cases, but not in others under apparently similar conditions. It is not, however, altogether improbable that Dr. Schiff's results may be due to a direct germicidal action of the X-rays on the tubercle bacillus. Light, we know, is deleterious to this organism, and Dr. Finsen, of Copenhagan, has reported cases of cure in lupus, by protracted exposure to concentrated light, so arranged that the ultra violet rays predominated.

Dust and Disease.

Dr. John Robinson in dealing with tnis important question says:

I feel certain that dust, uuder certain conditions, is the chief agency in the transference of the poison from the soil to the subject; and this, of course may be direct or indirect. A good deal of attention has been directed tó this subject by Continental observers within recent years, and I think from the experiments which have been made by others, together with my own observations, I am now entitled to say that dust is a very frequent means of spreading soil diseases.

Those of us who did bacteriological work ten to fifteen years ago will remember how seldom our plate cultivations became contaminated with air organisms in our moist chambers. A moist chamber was ready for use in less than an hour's time, that is tó say, the organisms present in the air had subsided in this time, so as tó leave the air sterile. It was usually found that if any contamination did occur it was due to moulds, the spores of which are known to be very small and light. Quite recently I have had an oppportunity of making extended observations in a large lead-lined chamber, six feet high, the walls of which were wetted, and it was found that plates of gelatine exposed for fifteen minutes at the bottom of this chamber became contaminated first with micrococci, bacilli, and moulds; afterwards with moulds; and at the end of two hours and a quarter (as a mean of five observations) they ceased to become contaminated. Observations were made as to the number of particles in this air at the beginning and at various intervals during these observations by means of one of Aitken's dust counters and also by means of passing a beam of light through the air, and it was found that at a time when the air became sterile as far as the gelatine plates were concerned it yet remained crowded with particles of dust tó such an extent as to exceed the capabilities of the small dust counter I had at my disposal. It was also seen that the particles were being carried about actively by convection currents. The practical conclusion to be drawn from these experiments is that the infectious particles in the air are heavy and quickly subside if the air is allowed to remain still.

I am inclined to believe that the raft theory is the correct one (with a few exceptions, as in the case of the spores of certain moulds). If this is the case, it goes far to explain the reason why persons living in or entering an infected area only become infected, for it presupposes that such heavy particles will not travel great distances, but will rather tend to contaminate food and water in the area. For instance, during a long warm summer, one area may infect numerous other areas, and so extensive and widespread outbreaks occur in contrast to the much more localised outbreaks which occur during a short summer. While this is the case, there appears to be abundant evidence that there are certain limitations to the spread of typhoid infection by dust. It is not possible for me here to review the recent work of Flugge, Germano, Neisser, and others as to the conditions under which dust may carry the typhoid infection, but it seems tó me that their work fits in well with the dust theory founded on practical experience of the methods of spread óf typhoid fever.

The Cure of Diabetes.

Pietro Lupo, writing in the "Canadian Practitioner," states as follows:—

For two years I have been persuaded that uric acid diathesis, diabetes, oxaluria, etc., are different phases of one single morbific entity, and since I knew of no single case truly cured on the meat diet, and since I experienced in myself the beneficial effects of a diet exclusively vegetable, banishing wine absolutely and rendering the blood very alkaline—in myself, who used to suffer in a dreadful manner, so as to almost make me attempt suicide—I made bold, by way of experiment, to prescribe the same diet, exclusively vegetable, for the first case, and saw in this patient, too, the beneficial results of such a dietary. With greater hope of success I ordered the second case to take the same diet, and in him the effects have been truly marvellous. In the vegetable dietary I excluded nothing—all edible soups, peas, beans, saccharine fruits, including the grape. I allowed everything, and the results have been as above.

In my second case it was noticed that after two months of the vegetable diet the analysis of the urine showed not only a complete absence of sugar, but the presence of many crystals of oxalate of lime, from sixty to seventy for each field under the microscope. It might seem that this was owing to the vegetable diet, especially as they had not been noticed when the urine was diabetic. And so one might fear that the patient had only changed his diabetic condition for an oxaluric one, and we would then not know how to feed him, as the exclusively meat diet and the mixed diet had done no good. But I, firmly convinced, instructed the patieut to continue the vegetable diet, and the result has been that the

oxalate of lime, too, has disappeared from the urine.

One certainly cannot draw decisive inferences from these two cases, especially as the etiology of diabetes is multiple; but we can, I think, conclude that very many diabetics can be cured on the vegetable diet. I have under my care at present a case in which the analysis of urine shows more than 100 crystals of oxalate of lime for each field of the microscope. This patient is improving on the vegetable diet.

The Contagiousness of Tuberculosis.

Moussu, of Alfort, who has made a special study of the conditions under which tuberculosis is transmitted by contagion, reported his results to the Congress of Tuberculosis recently held in Paris. He made, says the British Medical Journal, an experiment which consisted in exposing to direct tuberculous contagion several animals of different species by placing them in the same byre with tuberculous cattle. Care was taken to ascertain that the animals—among which were 7 bovines, 17 goats, 2 sheep and 1 pig—were all healthy before exposure. The 7 bovines reacted to tuberculin before they showed any clinical sign of tuberculosis. All save one were killed, and in all there were found tuberculous lesions generally limited to the mediastinal or mesenteric glands. Of the 17 goats, some reacted distinctly on being subjected to the tuberculin test; the others were shown by *post mortem* examination to be tuberculous. The 2 sheep reacted to the tuberculin. In one which was killed in no long time afterwards there was no tuberculous lesion visible to the naked eye. In the other, which was killed after a longer interval, distinct tuberculous lesions were found. The pig had been bitten on the thigh, and had been infected with tuberculosis at the site of the wound by bacilli contained in the litter of the byre. The length of stay of all the animals in the infected byre varied from five months to one or two years. The author adds that dogs and fowls exposed to contagion in the same manner always remained free from tuberculosis.

Typhoid Fever and Insanity.

Paris records, says the British Medical Journal, the case of a woman, aged 44 years, who for several years had been insane with ideas of persecution and of grandeur. An attack of typhoid fever occurred, and ran an uncomplicated course, and as it subsided the insane ideas became less prominent and less fixed. A relapse of typhoid followed, with very severe symptoms, and on recovery the patient seemed perfectly sane. The case had always been regarded as incurable, and the disappearance of mental symptoms was thought at first to be only temporary; the patient was accordingly kept in the asylum some months longer; but now, after three years, there has been no return of insanity. Hyvert records three cases of insanity in which typhoid fever occurred. In two of these an improvement in the mental condition followed. One, a woman, aged 20, with acute mania of two months' duration, completely recovered from her mental symptoms as the typhoid subsided; the other, also a woman aged 20, weak-minded, with hallucinations and insane ideas, had a severe attack of enteric with rigors and broncho-pneumonia; when these passed off the mental condition was found to be much improved, and the patient left the asylum practically cured.

Nervous Dyspepsia.

Attention has been called by Dr. Murdoch to the sudden and marked changes in the amount of hydrochloric acid occurring in this disease; this, together with the usual mental depression, the pain in the eyeballs, and the drowsiness and loss of memory, being the most prominent symptoms of the disorder. The object of treatment must be to restore the lost balance of the secretory nerves, and for this purpose strychnine and electricity are perhaps our most efficient agents. In the cases he reports, this treatment proved very successful. It included especially intragastric faradisation. Bathing and exercise, of course, must not be neglected, and a properly regulated diet is of the greatest importance. It should be regulated according to the state of the gastric secretions. Some patients take too little food. In closing, he quotes Allbutt: "In certain cases of neurasthenia or pseudo-neurasthenia the stomach is the primary source of departure from health; in others, if, indeed, the irritation of the morbid series lay with the nervous system, the secondary impairment of the stomach may become the central feature, and the alleged neurasthenia may be due to bad products of digestion, which returning again to the stomach, depress it and its work still further; if so a cure is to be obtained by gastric medication only; the stomach is the link in the vicious circle which has to be forged anew."

Dr. J. S. Lafferty, of Glass, N. C., has moved to High Point, N. C., and will hereafter practice medicine there. The doctor is a skillful physician, and will do well in his new field.

Gastric Hyperæsthesia.

A. Pick understands under this term an increased sensitiveness of the gastric mucous membrane to chemical, mechanical, and thermal stimuli, or to any one of them. (British Medical Journal).

Thus a patient with good appetite has pain when certain articles of food or drink are taken, and this is not relieved until such food or drink has disappeared from the stomach. The more empty the stomach the more certainly is pain produced by these articles. The stomach is most often hypersensitive to sugar, fat, and carbohydrates. There is in these cases no pain when the stomach is empty. Of thermal stimuli the stomach is more often sensitive to cold. The abnormal sensations may vary, amounting sometimes to severe pain, and even vomiting may occur. It is characteristic that fluids are as badly borne as solids or even worse. As to chemical stimuli, sometimes acids cannot be taken, as they produce so-called heartburn or even cramp-like pain in the stomach region. Heartburn, occurring a couple of hours after food, is usually due to hyperchlorhydria. Pick is convinced of the reality of this acid hyperæsthesia. Sometimes along with it there are typical signs of hypersecretion. Past gastric affections, over-eating, psychical influences, mental overwork, hysteria, neurasthenia, influenza are among the causes of gastric hyperæsthesia. Pain, eructation, heartburn, and vomiting are the chief symptoms. The pain is usually diffuse and disappears when vomiting supervenes; it may be lessened by faradism. The vomiting is characteristic in so much that fluids are more often vomited than solids. Sometimes vertigo and faintness are complained of. The diagnosis is based upon the healthy state of the gastric juice and the occurrence of periods free from symptoms. The diagnosis from gastric ulcer may be difficult. The treatment must be directed to the neurosis on which the disease depends. The feeding is important. The faradic current is useful. The treatment is largely suggestive. Medicinal agents occupy a secondary place; cocaine and menthol are the most efficient. The use of alkalies is only symptomatic treatment, and of these magnesia usta is the best for allaying the heartburn.

Control of Diphtheria.

W. K. Jaques (Journal of the American Medical Association, Nov. 26, 1898,) says antitoxin should be subjected as little as possible to the vicissitudes of commerce. It deteriorates with age, and the irregular demand often leaves it on the druggist's shelf for months. When it is needed it is usually in an emergency, when the life of a patient is dependent upon the quality of the first dose of serum. Irresponsible firms have been tempted to place an unreliable grade of serum on the market. Foreign governments have restricted the manufacture of the article. If State officers are not able to do this, they are at least in a position to investigate and satisfy themselves of the best grades. No greater service can health officers perform than to arrange for a fresh supply of a reliable grade of antitoxin, throwing careful restrictions about the distribution of that intended for purposes of charity. Delayed treatment always means increased infection.

As to the reduction of mortality from careful bacteriological work and the use of a reliable antitoxin, Dr. Jaques says that the predisposition to this disease is as great in Chicago as in any city of its size in the world. Its geographical situation makes it the commercial center of the United States; while the immense system of railways radiating from and through it makes it a rendezvous for all classes. Added to this are its crowded districts and its raw lake winds, which have together made the city a shining mark for diphtheria. By furnishing convenient culture media, microscopic examinations, the best obtainable grade of antitoxin, and the services of expert physicians as inspectors and operators, Chicago has reduced its death-rate from this disease 37.5 to 6.7 per cent.

Galvanism of the Neck in Obstinate Vomiting.

As early as 1884 Apostoli, says "Medicine," 1899, read an article before the French Society of Electrotherapy upon galvanism of the pneumogastric nerve for vomiting. In his earlier communication Apostoli gave exact rules for the application, the duration of each siting, and strength of current to be employed. Two methods were advised—in one the positive pole was placed on the side of the neck and the negative over the epigastrium. In this way he believed that the descending galvanic current was passed along the pneumogastric nerve. He also described a method known as the bipolar, in which a current was passed transversely through the neck just below the mastoid region. Galvanism applied in this way is very efficient in the control of vomiting from reflex causes, and especially those of a hysterical character. Experience shows that the passage of the current from one side of the neck to the other is somewhat more efficient than when

the current is passed from the neck to the epigastrium. We have used the term galvanism of the neck in designating Apostoli's method as it conveys no doubtful theory of the structures acted upon by the current. The act of vomiting is a very complex one, and in addition the uncertainty of passing a descending galvanic current along the pneumogastric nerve is so great that we prefer to employ the term galvanism of the neck as indicating a procedure of considerable value in the treatment of obstinate cases of vomiting.

Hot Water in the Treatment of Gonorrhea.

C. S. Murrell (Massachusetts Medical Journal, 1898, Vol, XVIII) recommends hot water irrigations in the treatment of gonorrhea. The apparatus consists of a soft catheter, which is passed to within one inch of the prostatic urethra. It is then connected with a "gravity apparatus," in which the water is gradually heated up to the point of tolerance. The steam flows in through the catheter, and returns between the catheter and the mucous membrane. Several quarts of warm water may be used at each treatment. Some patients can tolerate a temperature as high as 180 deg. or 190 deg. F. The following advantages are claimed for this method of treatment:

1. The course of the disease is shortened by at least two thirds, making the average limit of the case—viz., stoppage of the discharge—nearer one week than three.

2. The discharge immediately changes from a purulent to that of the nature of gleet, and is reduced to a very small quantity.

3. There is absence of chordee and pain in passing urine.

4. Stricture, as a sequel, which is well understood to be the frequent result of using strong astringents, is improbable,

Vitality of the Diphtheria Bacillus.

Macgregor (The Hospital Dec. 17, 1898) reports a case of a boy, aged eight years, in which the Klebs-Löffler bacilli were present in a virulent condition nearly six months after the attack of diphtheria. He cites other instances of a similar kind. Thus Schäfer records a case where bacilli found in the throat, examined seven and a half months after the attack, proved virulent by inoculation of animals. Tobeisen found diphthera bacilli in the throat of 24 out of 46 patients at the time of their discharge from the hospital and in 19 out of the 24 cases the bacilli proved virulent. Bigg stated that "in 245 cases out of 405 cases of true diphtheria the diphtheria bacilli disappeared within three days after the complete separation of the false membrane; in 160 cases they persisted for a longer time anmely, in 103 cases for seven days, in 34 cases for 12 days, in 16 cases for 15 days, in 4 for three weeks, and in 3 for five weeks, after the time when the exudation had completely disappeared from the upper passages." The author further cited the statement of Hewlett and Knight that they were sometimes able to convert the non-virulent pseudo-diphtheria bacillus into a virulent Klebs-Löffler bacillus; and that by careful treating it has apparantly been possible to convert a typical Klebs-Löffler into a typical non-virulent pseudo-bacillus.

To get rid of the bacilli A. C. Abbott, director of the Bacteriological Laboratory, Philadelphia, recommends thorough application once daily, to the parts that have been affected, of a solution of 60 grains of silver nitrate to the ounce of water. Two applications are usually sufficient, but occasionally a third is necessary. Weaker solutions were found to be more painful. It should not be used until the membrane has disappeared, as otherwise the coagulum formed might protect organisms below it.

Subcutaneous Injection of Iron.

Birgelen, (British Medical Journal) says that there are cases in which a course of iron is strongly indicated and yet it cannot be given by the mouth. The author has recently treated four patients with the subcutaneous injections of iron in whom the effects of rest and diet were as far as possible eliminated. He used a 10 per cent. watery solution of ferrum citricum oxydatum, but more recently a similar solution of ferrum citricum ammoniatum. The injections were made into the arm under all the ordinary precautions. The solution should not be more than ten days old and should be sterilized. Even with these precautions there were signs of local irritation, especially in the case of the first named salt. The author then gives details of his four cases. In the first case there was the clearest evidence of the good effects of this mode of treatment. In the second case the improvement could not be so distinctly assigned to the treatment, whereas in the third case the treatment was unsuccessful, and in the fourth it had to be interrupted owing to an abscess which appeared in the arm. The author thinks that, although the results are not brilliant, yet the value of the treatment cannot be denied. The subcutaneous method is only to be adopted when treatment by the mouth fails.

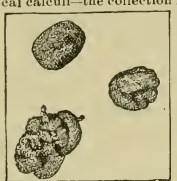
BUFFALO LITHIA WATER

Disintegrates and Eliminates Renal and Vessical Calculi, Uric Acid Phosphatic and Oxalic Concretions.

Modus Operandi of the Water in such cases as suggested by Dr. J. W. MALLET, Prof. of Chemistry, University of Virginia.

UNIVERSITY OF VIRGINIA, CHARLOTTESVILLE, VA., Oct. 11, 1898,
COL. THOS. F. GOODE, Buffalo Lithia Springs, Va.

DEAR SIR:—I have examined at your request three collections of calculi, handed me on your behalf by Dr. A. G. Kimberley, of which those marked No. 1 and No. 2, I was informed had been reported on by Dr. F. S. Whaley, resident Physician at the Buffalo Lithia Springs, as passed by patients under the action of the water of Spring No. 2; the collection No. 1 representing renal and No. 2 vesical calculi—the collection marked No. 3 being vesical calculi reported on by Dr. G. L. Wimberly, of Rocky Mount, North Carolina. I have also examined at your request a fourth specimen of disintegrated calculous material which was sent me nearly two years ago by Dr. E. C. Laird, at that time Resident Physician at the springs, reported on by Dr. Laird as passed in large quantity—several ounces in all—by a patient using the water of one of these springs; this last specimen I have designated No. 4.

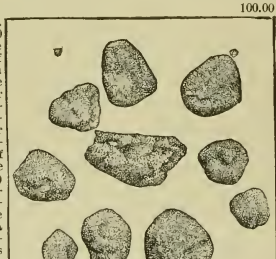


PECIMEN NO. 1.

No. 1 consisted of three granules, of light cinnamon brown colour, both outside and on a surface of fracture; two of them were of regular shape, somewhat honeycombed, looking as if acted upon by a solvent; of medium degree of hardness: aggregate weight of the collection .181 gramme. Photograph No. 1 represents this collection magnified 1.8 diameters. An analysis of the whole of this collection gave the following results:

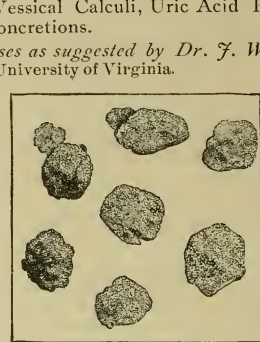
Uric acid	78.93
Ammonium urate	17.35
Sodium urate	trace
Calcium urate	.72
Ammonium magnesium phosphate	1.19
Calcium phosphate	trace
Organic colouring matter	trace
Proteid organic matter, and hygroscopic moisture	1.61
	100.00

Collection No. 2 consisted of 10 granules, for the most part of light yellowish brown color like No. 1, but rather lighter and whitish on the outside, smoother and more rounded than those of No. 1; but one (the largest) granule exhibiting a honeycombed surface (this one also a little blood-stained mucous on the outside, which was scraped off prior to analysis) moderately hard and compact; two or three of the finer showing distinct concentric layers; aggregate weight of the collection .829 gramme. Photograph No. 2 shows this collection, magnified 1.8 diameters. Analysis of the whole collection gave:



SPECIMEN NO. 2.

Uric acid	71.32
Ammonium urate	4.73
Sodium urate	.18
Calcium urate	.10
Calcium oxalate	20.26
Ammonium magnesium phosphate	1.15
Calcium phosphate	.94
Iron phosphate (ferric)	trace
Organic colouring matter	trace
Proteid organic matter and hygroscopic moisture	1.32
	100.00



SPECIMEN NO. 3.

No. 3 consisted of seven granules, or separate small calculi of browner and darker colour than Nos. 1 and 2, both externally and on a surface of fracture. With generally rounded forms, the external surfaces were finely rough and pitted, as in No. 1, and the interior porous, presenting the appearance of having been acted upon by a solvent liquid; aggregate weight of collection .568 gramme. Photograph No. 3 shows this collection magnified 1.8 diameters. Analysis of the whole collection gave:

Uric Acid	90.68
Sodium urate	.46
Calcium urate	.63
Ammonium magnesium phosphate	7.10
Calcium phosphate	trace
Iron phosphate (ferric)	.18
Calcium oxalate	trace
Organic colouring matter	Notable trace
Proteid organic matter, and hygroscopic moisture	.95
	100.00

No. 4 was a fine sandy powder of a light buff colour, nearly white. Under the microscope the greater part was seen to consist of small crystals and crystal fragments. There were a few minute fibres of wood (the presence of which was pointed out by Dr. Laird, and explained by the mode of collecting the specimen); these were picked out prior to analysis. Weight of specimen as received 1.544 gramme, Photograph No. 4 exhibits the appearance of this material, magniged .65 diameters. The results of analysis were:

SPECIMEN NO. 4.

Ammonium magnesium phosphate	64.93
Calcium phosphate	21.65
Iron phosphate (ferric)	.13
Calcium carbonate	3.99
Uric acid	3.73
Ammonium urate	3.81
Sodium urate	.58
Calcium urate	.32
Proteid organic matter, and hygroscopic moisture	.86
	100.00

In the case of Nos. 1, 2, and 3, the concentric structure of the granules was too fine, and the whole quantity of material too small to admit of separate examination of such thin layers as were present of various composition, due to varying character of the urine during the time within which each calculus had formed.

It seems on the whole probable that the action of the water is primarily and mainly exerted upon uric acid and the urates, but that when these constituents occur along with, and as cementing matter to, phosphatic or oxalic calculous materials, the latter may be so detached and broken down as to disintegrate the calculus as a whole in these cases also, thus admitting of urethral discharge.

(Signed) J. W. MALLET.

Buffalo Lithia Water in cases of One Dozen Half Gallon Bottles, $5.00. F. O. B. Here.
Sold by all First-class Druggists.

THOS. F. GOODE, Proprietor Buffalo Lithia Springs, Va.

Superior to IODOFORM. **Odorless. Tasteless.**

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NOSOPHEN

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This chemical salt of Nosophen is intended for employment as an intestinal antiseptic and as such it gives most excellent results. To judge from clinical reports, it is decidedly an efficient intestinal antiseptic, and has the great advantage of being absolutely harmless and non-irritating, odorless and tasteless. Indicated in typhoid fever, chronic intestinal catarrh, diarrhœa of phthisis, infantile diarrhœa, chronic enteritis, etc.

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PROVED BY CLINICAL SUCCESS IN THE PAST.
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The Vomiting of Pregnancy.

Dr. Bacon (Amer. Jour. of Med. Science) states:

The abnormal irritability of the nervous system, including the vomiting center, is to be allayed by keeping the patient in the horizontal position, by attention to the skin, bowels, and kidneys, using rectal, and, if necessary, hypodermic injections of salt solution.

The hysterical condition which is so commonly present should be controlled by strengthening the will and influencing the dominant idea of the patient. All sources of peripheral irritation should be discovered and treated.

In extreme cases subcutaneous saline injections serve the three-fold purpose of (a) diluting the blood and increasing vascular tension; (b) eliminating toxins through renal and intestinal emunctories; (c) furnishing two most important kinds of food.

Induction of abortion is never indicated. At a stage when it is safe and efficient it is not necessary, and in extreme cases it adds greatly to the danger, rarely stops the vomiting, and can be replaced by the artificial serum.

READING NOTICES.

AIRLIE, N. C., April 15, 1898.
The Ammonol Chemical Co., New York

Gentlemen:—The first use I made of Ammonol was in my own case. Some two months since I was taken in the morning with very premonitory symptoms of grippe which continued to develop in intensity until at night I found myself with high fever and partially delirious. I called in a friend whose diagnosis was grippe and prescribed Ammonol, grs. v., Morphine Seed, gr. $\frac{1}{8}$, to be repeated in one hour. Fever abated; a gentle perspiration was induced; slept pleasantly the remainder of the night and the grippe was aborted. Ammonol forms a preparation that supplies to the profession a much needed remedy.

DR. E. A. THORNE.

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"I have prescribed Dioviburnia and Neurosine in Female Neurosis with results entirely satisfactory. I shall continue to use these two products in combination in all cases indicated."

J. J. KELLY, M. D.,
Oct. 26, 1898. Argentine, Kans.

A Valuable Opportune Remedy.

This is the time of the year when Grippe, Neuralgia, Dengue and "bad colds" abound —in fact, are all but universal, and the physician is kept busy prescribing for them. Among the favorite remedies in such cases is Laxiquinin, which while of comparatively recent introduction, has already acquired an enviable reputation as a remedy in Grippe, Neuralgia and Dengue, and allied ailments, Laxiquinin if given in the beginning of a cold, will abort it, while it is invaluable in the treatment of Grippe, Dengue and other catarrahal and Malarial diseases, from which it takes away the chief terror—the "back-bone" characteristics. Laxiquinin, Toniquinin and Iquinin are manufactured by the Iquinin Chemical Co., of St. Louis. For samples and literature address the manufacturers as above.

Vague and Indefinite Pains due to Latent Rheumatic Conditions.

The physician is frequently called upon to treat patients, who though not ill enough to be in bed are not at all well. Their appetite is capricious, they sleep indifferently or even if they sleep soundly, they are not refreshed and in the morning they are more fatigued and ill at ease than was the case on retiring. Upon awaking there is frequently an aching sensation in the loins, sometimes in the lower limbs, which is noticed upon getting out of bed or in dressing, and particularly in putting on their hose or lacing their shoes. As the day progresses this soreness may partially wear off, but there is at all times a vague, undefined, uneasy painful feeling.

A competent examination of the urine in these cases will in almost every instance be found to disclose a notable absence of the soluble urates. On the contrary it may be loaded with the phosphates and very frequently bile will be present as also uric acid. If the condition remains neglected, tne probable results will be sooner or later a pronounced attack of rheumatism in one or another of its forms. All that is needed to induce such a condition is a sudden change in the weather or the exposure on the part of the patient to cold or wet or a combination of the two. This is due to a latent rheumatic diathesis, to which every adult is liable.

In such cases the physician will find Tongaline in any one of its forms as indicated, given at short intervals with copious draughts of hot water, a remedy which goes directly to the source of the trouble. Tongaline seeks out the retained excretions or perverted secretions, which it either neutralizes or renders amenable to the physiological action of the emunctories, and then it brings to bear its strong eliminative powers, correcting the complaint promptly and thoroughly.

Allen & Hanburys Ltd., London.

It will be interesting to our readers to learn that the oldest and foremost pharmaceutical house in England has lately established a branch at No. 82 Warren Street, New York, hence some of the more important of its preparations, notably throat Pastilles, and Infants Foods, may be obtained.

Allen & Hanburys Ltd., was established A. D. 1715 and has never ceased growing, not only in point of size but in the estimation of the medical profession. Its reputation for accuracy and purity of products is such when physicians wish to be absolutely sure of what their patients are getting they invariably prescribe "Allen & Hanburys." This is no mean tribute after nearly two hundred years of commercial life.

The specialties they are now introducing to the physicians of the United States are: Throat Pastilles; "Perfected" Cod Liver Oil, manufactured by their own workmen in their three factories in Norway; "Tasteless" Castor Oil, which is not only tasteless but pure castor oil; "Bynol" an intimate combination of "Allenburys" Malt Extract with their own Cod Liver Oil: and last but not least the "Allenburys" Series of Infants Foods manufactured in accordance with Allen & Hanburys original System of Progressive Infant Feeding, which provides for foods adapted to the several stages of Infant Feeding. This scientific system is meeting with unbounded success in England, as it ought everywhere.

Literature and samples of these specialties will be furnished free on application to No. 82 Warren Street, New York.

The usefulness of good Hypophosphites in Pulmonary and Strumous affections is generally agreed upon by the Profession.

We commend to the notice of our readers the advertisement on page 20 of this number. "Robinson's Hypophosphites" also "Robinson's Hypophosphites with Wild Cherry Bark" (this is a new combination and will be found very valuable) are elegant and uniformly active preparations; the presence in them of Quinine, Strychnine, Iron, etc.. adding highly to their tonic value.

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LISTERINE is a non-toxic, non-irritating and non-escharotic antiseptic, composed of ozonifer ous essences, vegetable antiseptics and benzo-boracic acid.

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LISTERINE is invaluable in obstetrics and gynecology as a general cleansing, prophylactic, or antiseptic agent, and is an effective remedy in the treatment of catarrhal conditions of every locality.

LISTERINE is useful in the treatment of the infectious maladies which are attended by inflammation of accessible surfaces—as diphtheria, scarlet fever and pertussis.

LISTERINE is especially applicable to the treatment of scarlet fever, used freely as a mouth wash, or by means of the spray apparatus.

LISTERINE is extensively prescribed in typhoid fever, both for its antiseptic effect and to improve the condition of the stomach for the reception of nourishment.

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LISTERINE is used extensively with good results in the treatment of whooping cough.

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LISTERINE is indispensable for the preservation of the teeth, and for maintaining the mucous membrane of the mouth in a healthy condition.

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LISTERINE is kept in stock by the leading dealers in drugs, everywhere.

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Close clinical observation has caused LAMBERT'S LITHIATED HYDRANGEA *to be regarded by Physicians generally as a very valuable* RENAL ALTERATIVE *and* ANTILITHIC AGENT.

Albuminuria, Lithæmia,
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Hæmaturia, Vesical Irritation

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Dear Sir—I feel assured you have the best food preparation on the market. I had a son—a soldier—come home low with typhoid fever. I used Imperial Granum and it acted like a charm. He is now well.

It allays inflammation, reduces fever, quiets the patient and is a great blessing. I wish you a happy Christmas.

—— —— M. D.

NEWPORT, Dec. 16, 1898.

Phillips' Emulsion.

There is no necessity for the discontinuance of the use of Cod-Liver Oil (because of failure to obtain results from Plain Oil or some Emulison) for the undoubted therapeutic value of Cod-Liver Oil but emphasizes the necessity of its scientific exhibition to insure satisfactory results from its employment. The cause of failure in its administration is not obscure: few patients can take plain oil owing to its repugnant taste and the difficulty of assimilating it. The province of an emulsion being to disguise the taste, and to exhibit a definite volume of chemically unchanged oil in condition for easy absorption, it follows that this will be defeated unless the oil is thoroughly emulsified and in combination with agents that will not saponify it, as sponification renders it valueless and even harmful.

In emulsions with the Alkaline Hypophoshites of lime and soda the association of the oil with such agents entirely changes the character of the oil and produces a liquid soap. While less repugnant to the taste than plain oil, the medicinal value of such a preparation is greatly diminished, and it is because of this that many a disgusted practitioner has abandoned using Cod-Liver Oil in any form.

Admitting a preparation of Cod-Liver Oil with Hypophoshites of lime and soda to be unscientific because productive of chemical alteration in the oil it follows that a combination of oil with the phosphate salts, giving positive acid reaction and thus precluding saponification, would seem to be based on sound therapeutic reasoning, furthermore, if such an emulsion exhibits a large percentage of chemically unchanged oil in minute, microscopic sub-division closely analogous to milk (Nature's Emulsion) it must be preferred to plain oil as well as to Alkaline Emulsions, because of the difficulty and failure already referred to attending their administration.

Phillips' Emulsion positively exhibits the important advantage noted, the oil is emulsified with pancreatine, and because of its scientific preparation it has for many years enjoyed an extensive professional support. A more concise statement of its claims for professional recognition will be found in our advertising columns, and we say with all candor that it is an ethical preparation, ethically introduced and maintained.

"Allenburys" Throat Pastilles.

The leading throat specialists and physicians generally in England and the Continent have for many years been employing the "Allenburys" Pastilles with the best results. These elegant Pastilles(jujube) have no rough, angular corners, are soft and demulcent, and are prepared with that accuracy for which the oldest and largest drug house in England is so justly famous.

The London Lancet says: "Nothing can be more gratifying to the sight and more attractive to the taste than Messers. Allen & Hanburys' collection of Jujubes, prepared by a special process. The tints are very clear and brilliant, the paste is not adhesive, and it seems that the only difficulty is to make a choice amongst the great variety. The Glycerine Pastilles form a very elegant and tempting preparation."

For list of formulae see page 112 and when ordering please do so by number. Address Allen & Hanburys Ltd., 82 Warren Street, New York.

Ecthol.

Sample of Ecthol was received and at time of receiving had good case to use it. Miss —— had the misfortune to run hedge thorn one inch long in leg above ankle. It remained in one week when she was brought to my office to have it extracted. Was successful in removing thorn, but it being a dead one pieces of bark remained in wound. Disinfected wound with bi-chloride, bound it up and sent patient home. Was summoned in two days and found limb inflamed to groin, swollen and very painful. Removed bandage which was followed by a small quantity of pus. Re-applied dressing. That night bottle of Ecthol was received, visited patient next day, and put her on Ecthol, teaspoonful six times a day, and injected medicine in the wound and applied cloth saturated with same. In four days pain, swelling and inflammation gone, wound healing and patient able to do her work. A. L. STIERS, M. D.

Dawson, Neb., Nov. 25th, 1898.

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(30 volumes preserved aqueous solution of H_2O_2)

IS THE MOST POWERFUL ANTISEPTIC AND PUS DESTROYER. HARMLESS STIMULANT TO HEALTHY GRANULATIONS.

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(C. P. Glycerine combined with Ozone)

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These Remedies cure all Diseases caused by Germs.

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"Half an hour before meals, administer from 4 to 8 ozs. of a mixture containing 2 per cent. of **Hydrozone** in water. Follow after eating with **Glycozone** in one or two teaspoonful doses well diluted in a wineglassful of water."

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Marchand's Eye Balsam cures all inflammatory and contagious diseases of the eye.

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During the epidemic of the past winter I have used Kryofine in a large number of cases. Headache and muscular pains disappeared after first dose. There was continued amelioration of all the subjective symptoms. For the relief of pain Kryofine acts very rapidly and surely, the relief often occurring within fifteen minutes.

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Professor of Therapeutics and Clinical Instructor in Medicine, College of Physicians and Surgeons; Attending Physician Lake Geneva Sanitarium, etc., etc., Chicago.

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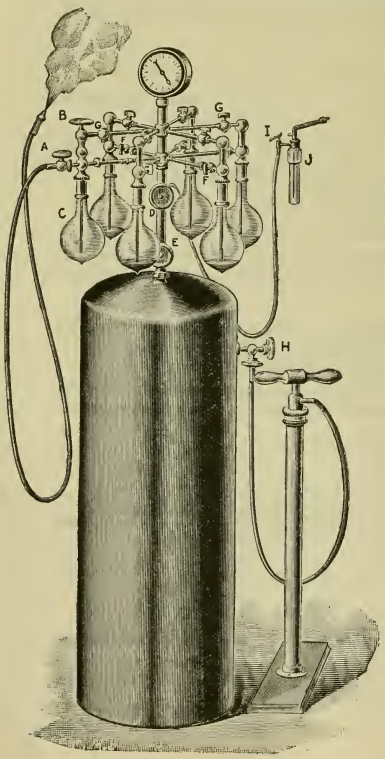

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Beware of Imitations.

The Pneumachemic Co.

120 Longworth Street,

CINCINNATI, OHIO, U. S. A.

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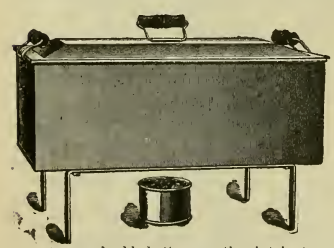

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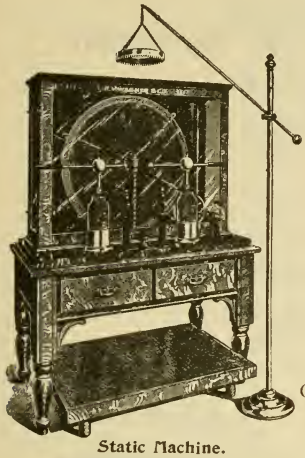

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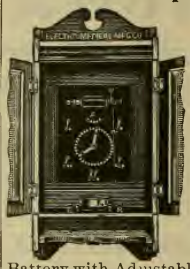

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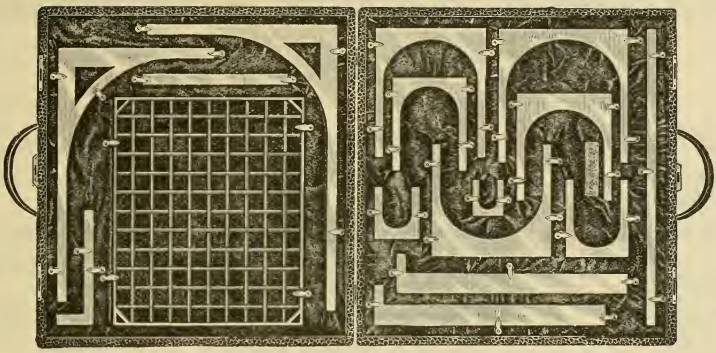

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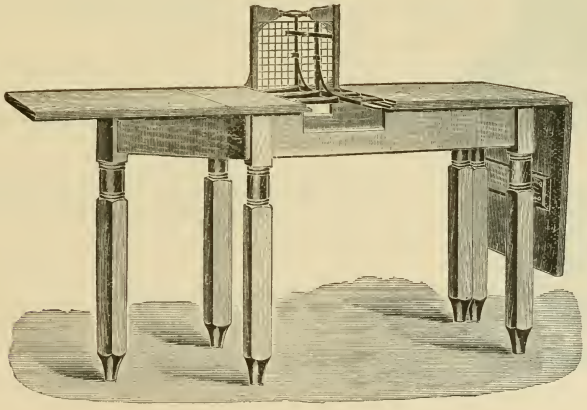

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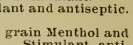

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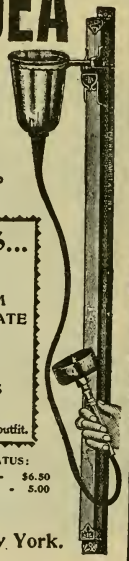

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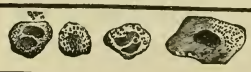
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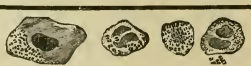

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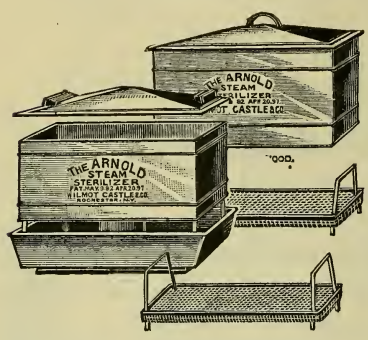

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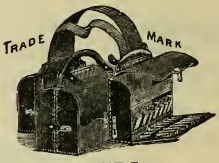

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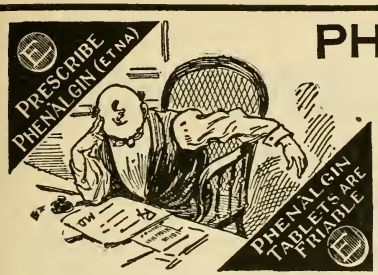

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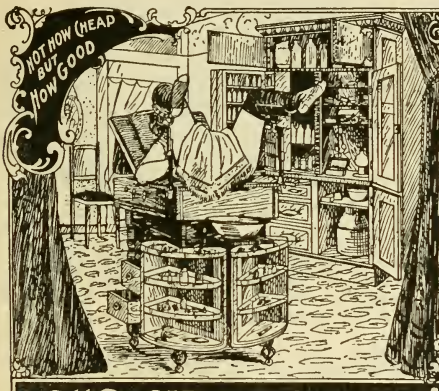

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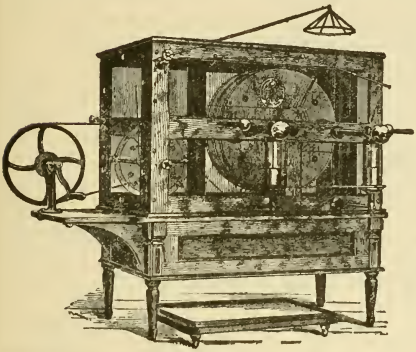

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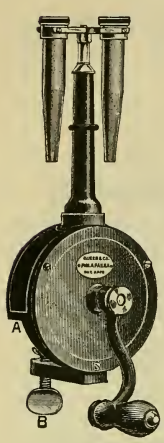

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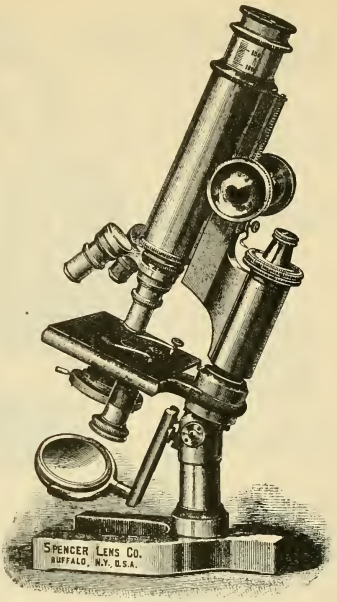

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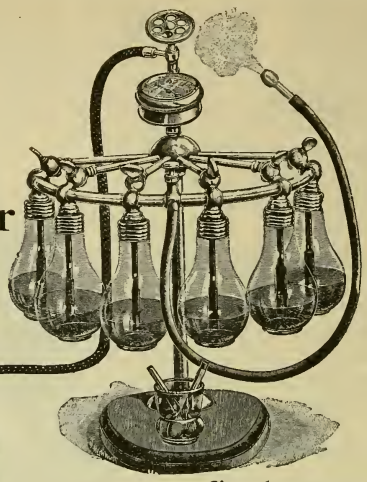

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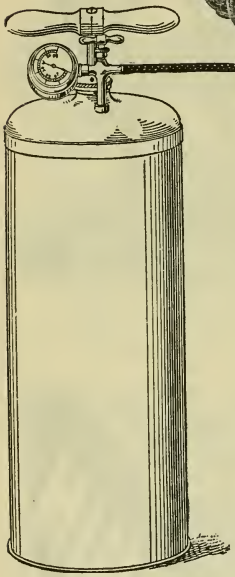

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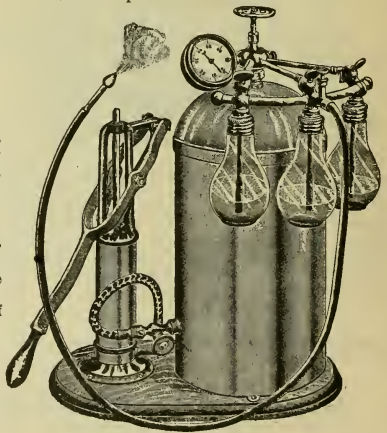

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SOUTHBOUND.

		No. 403.	No. 41.
Lv. Charlotte,	S. A. L.	*7 50am	*10 25pm
Ar. Clinton.	"	*9 45am	*12 14am
Ar. Abbeville,	"	11 03am	1 35am
Ar. Athens,	"	1 13pm	3 43am
Ar. Atlanta,	(Central time)	2 50pm	5 20am

NORTHBOUND.

		No. 492.	No. 38.
Lv. Charlotte,	S. A. L.	10 25am	*7 50am
Lv. Monroe,	"	*9 40pm	*6 05am
Lv. Hamlet,	"	*11 15pm	8 00am
Ar. Wilmington,	"	.....	*12 05pm
Lv. Raleigh,	"	*2 16am	*11 25am
Ar. Henderson,	"	3 28am	*12 57pm
Ar. Weldon,	"	*4 55am	*2 45pm
Ar. Richmond,	A. C. L.	8 20am	7 34pm
Ar. Washington.	Penn. R.R.	12 31pm	1 30pm
Ar. Baltimore,	"	1 46pm	10 08am
Ar. Philadelphia,	"	3 50pm	3 50am
Ar. New York,	"	*6 23pm	*6 53am
Ar. Portsmouth,	S. A. L.	7 25am	5 20pm
Ar. Norfolk,	"	*7 35am	*5 35pm

WESTWARD.

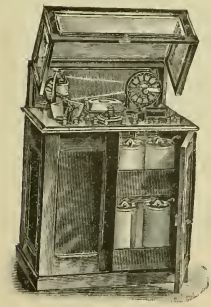
	No. 41.	No. 403.
Lv. Charlotte	10 25pm	7 50am
Ar. Mt. Holly	.....	9 45am
Ar. Lincolnton	.....	10 35am
Ar. Shelby	.....	11 37am
Ar. Ellenboro	.....	12 15pm
Ar. Rutherfordton	.....	12 50pm

†8 40am	Lv. Hamlet	Ar.	6 20pm
10 00am	Ar. Cheraw	Lv.	†5 00pm

EASTWARD.

	No. 38.	No. 402.
Lv. Charlotte	*5 10am	8 28pm
Ar. Monroe	5 55am	9 10pm
Lv. Monroe	6 05am	9 40pm
Lv. Marshville	6 25am	.....
Lv. Wadesboro	7 01am	10 31pm
Lv. Rockingham	7 41am	11 05pm
Ar. Hamlet	7 55am	11 23pm
Lv. Hamlet	8 20am	.....
Lv. Laurinburg	8 46am	.....
Lv, Maxton	9 05am	.....
Lv. Lumberton	9 53am	.....
Ar. Wilmington	12 05pm	.....

* Daily. † Daily Ex. Sunday.



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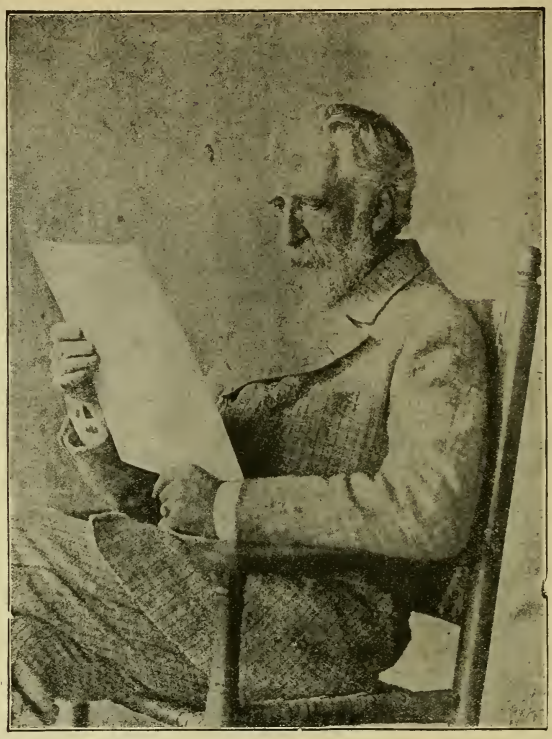

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because of their cleansing, soothing and healing properties. Bensolyptus is highly recommended in all inflammations of mucous membranes, especially in diseases of the

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are the most eligible and effective of germicides, and the most vigorous neutralizers of microbic poisons in the intestinal tract. The remarkable results obtained in tuberculosis, typhoid fever, rheumatoid arthritis, etc., are explainable by the great powers of elimination of toxalbumins that these remedies have been proven to possess. They are themselves neutral, non-toxic, and absolutely free from all caustic and irritant qualities.

At the Clinic of **Professor E. VON LEYDEN,** at Berlin, Creosotal has been used in a large number of cases of **phthisis pulmonum** with very good results. It agreed well with all the patients. It had a very favorable effect upon the night sweats and the fevers; and the cough and expectoration either disappeared entirely, or were markedly improved. The body weight increased in most cases.

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Orphol is soothing to the irritated and inflamed intestinal mucous membrane, besides acting as a continuous disinfectant. It does away with the dangers of caustic or poisonous antiseptic substances, such as carbolic acid, naphtol, resorcin, the bichloride of mercury, etc., and the use of complicated and uncertain diarrhœa and cholera mixtures.

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DOSE—Two teaspoonfuls four times a day, in water, milk, wine or other vehicle.

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That Codeine had an especial effect in cases of nervous coughs, and that it was capable of controlling excessive coughing in various lung affections, was noted before its true physiological action was understood. Later it was clear that its power as a nervous calmative was due, as Bartholow says, to its special action on the pneumogastric nerve.

Codeine stands apart from the rest of its group, in that it does not arrest secretion in the respiratory and intestinal tracts. In marked contrast is it in this respect to morphine. Morphine dries the mucous membrane of the respiratory tract to such a degree that the condition is often made worse by its use; while its effect on the intestinal tract is to produce constipation. There are none of these disagreeable effects attending the use of Codeine.

Antikamnia has stood the test of thorough experimental work, both in the laboratory and in actual practice; and is now generally accepted as the safest and surest of the coal-tar products.

"Antikamnia and Codeine Tablets," each containing 4½ grains Antikamnia and ½ grain Sulph. Codeine afford a very desirable mode of exhibiting these two valuable drugs. The proportions are those most frequently indicated in the various neuroses of the throat, as well as the coughs incident to lung affections.

Acute Inflammation of the Prostate Gland

The Journal of the American Medical Association contains a report on inflammation of the prostate gland, which was presented to The Section on Surgery and Anatomy at the Forty-ninth annual meeting of the American Medical Association, held at Denver, Colo., June, 1898, by Listen Homer Montgomery, M. D., of Chicago, Ills. His plan of treatment in acute inflammation of the prostate gland is to wash out the abscess cavity with hydrogen peroxid, give copious hot water enema and hot hip baths frequently, avoid morphine internally and advise care lest the patient strain at stool or during micturition. On the theory that toxins are retained in the circulation and within the gland and to prevent degeneration in the gland substance, he administers triticum repens or fluid extract tritipalm freely, combined with gum arabic or flaxseed infusion. Along with these remedies the mineral waters, particularly vichy with citrate of potash, go well together. Hydrate of chloral or this salt combined with antikamnia are the very best anodyne remedies to control pain and spasms of the neck of the bladder. These pharmacologic or medicinal remedies are the most logical to use in his judgment, while externally, applications of an inunction of 10 or 20 per cent iodoform, lanoline, as well as of mercury, are also of value.

Migraine—(Catarrhal.)

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Sig.—Crush and take one every three hours.

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As the years go by there is one drug that constantly grows in favor. To the physician of the Transmississippi region it is probably doubtful if it is necessary to say that this remedy is antikamnia; as all have used it. But increasing experience demonstrates its adaptability to conditions other than at first advised. It is notably of value in ovarian and other pelvic pain. If you have not tried it in this class of cases, do so.
—*American Journal Surgery and Gynecol.*

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To induce catharsis without the objectionable sequalæ common to a majority of laxatives, no remedy responds to the need of the physician with more satisfaction and celerity than SYRUP OF FIGS. As made by the California Fig Syrup Co. from the highest grade Alexandria Senna, SYRUP OF FIGS has achieved a potency and recognition as an agent of established therapeutic worth. There is no preparation that simulates Nature so well in its effect. No other is better suited to the permanent relief of intestinal inactivity, a functional derangement directly responsible for the condition described as constipation. Its gentle effect upon the intestinal mucous membrane and the natural peristalsis which follows the administration of SYRUP OF FIGS gives to it a unique value as a laxative, and suggests its adaptability to women and children because of its agreeable taste and persuasive action. It is invaluable to persons who through infirmity or occupation are committed to a sedentary life. It is *simple, safe* and *reliable,* and possesses the particular merit that its use does not induce the cathartic-taking habit, and in all cases where a laxative is indicated it is a help and not a hindrance.

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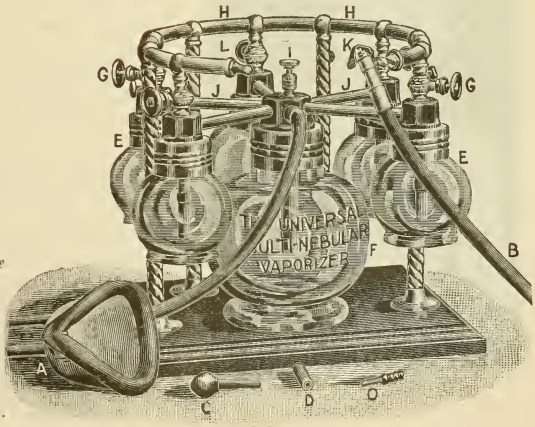

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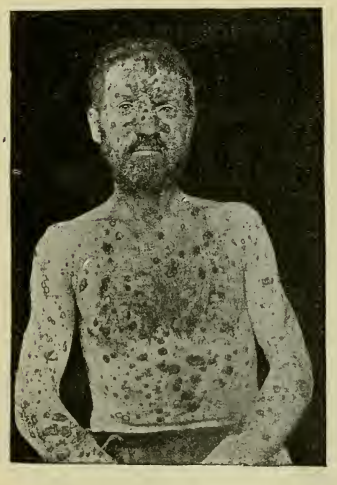

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A New Thing—and a New Name which, though literally translated (Blood Treatment), may not convey to every one a definite idea. It is a treatment which consists in opposing to a condition of disease the very power—good and sufficient Blood—that would naturally prevent it, that would still cure it spontaneously, and that actually does cure it spontaneously, wherever the blood-making work of the system is perfectly efficient; and therefore also *will* cure it, if a deficiency of the vital element be supplied from without, under proper medical treatment.

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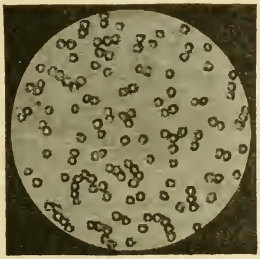

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behaves as a stimulant as well as an **Antipyretic and Analgesic** thus differing from other Coal-tar products. It has been used in the relief of rheumatism and neuralgic pains, and in the treatment of the sequelæ of alcoholic excess. AMMONOL is also prepared in the form of salicylate, bromide, and lithiate. The presence of Ammonia, in a more or less free state, gives it additional properties as an expectorant, diuretic, and corrective of hyperacidity.—*London Lancet*

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Dose:—For an adult, one tablespoonful three times a day, after eating; from seven to twelve years of age, one dessertspoonful; from two to seven, one teaspoonful; for infants, from five to twenty drops, according to age. Prepared at the Chemical Laboratory of

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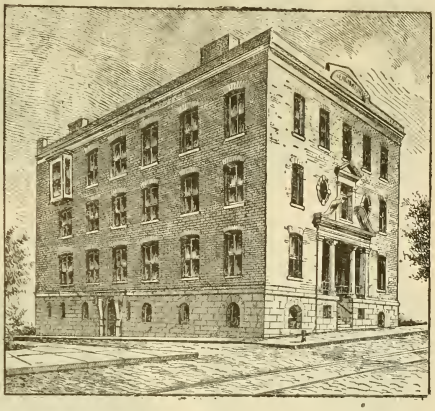

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B cause it is exceedingly simple in construction and completely accomplishes the purpose for which it was designed. It consists of a long point or barrel, on which a hard rubber bulb and three blades or arms for dilating the vagina. It can be takenapart, and is very easy to clean The advantages claimed for the syringe are:

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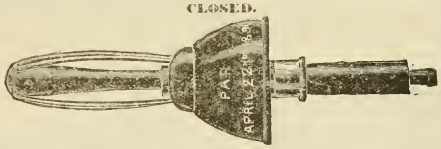

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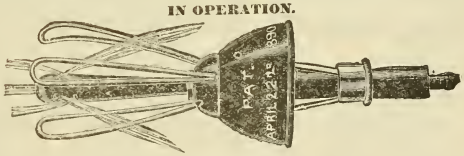

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FIRST. It is the only combination syringe that will hilite the parts well, so that no medicine comes in direct coad tact with all the diseased surface, thus insuring beneficial results.

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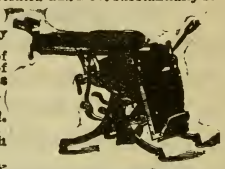

Fig. XVII—Dorsal Position.

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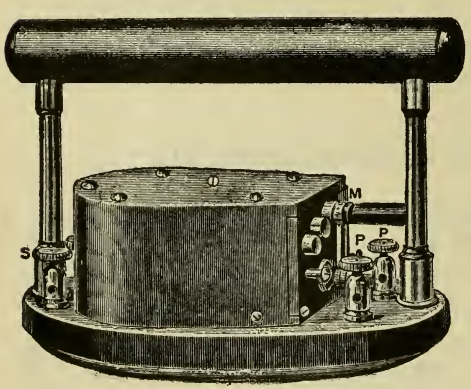

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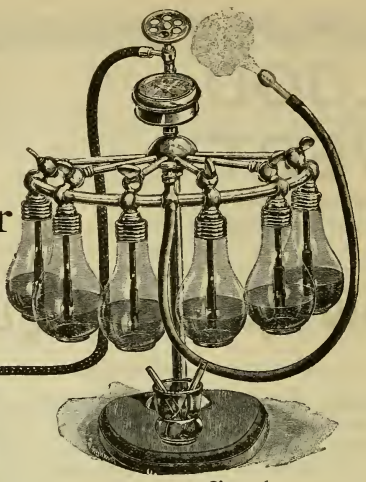

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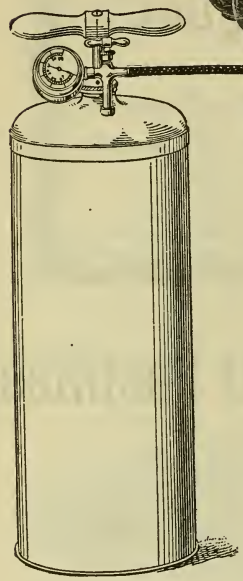

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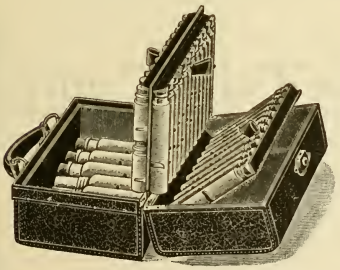

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Lithæmia.*

By John N. Upshur, M.D., Richmond, Va., Prof. of the Practice of Medicine, in the Medical College of Virginia.

Clinical observation, and personal experience for several years have impressed upon me the importance of this subject. Gout, when frankly declared in a joint, is very easy of diagnosis, and clear in its therapy, but when the subject of the gouty diathesis rarely or never has a joint involved, and the lithæmic manifestations, indicative of excess of uric acid in the system, declared by phenomena in skin, mucous membrane, viscera, ears or eyes, the diagnosis becomes more complicated, and consequently the indications for treatment more vague and embarrassed. A factor in the manifestation of the phenomena above indicated is age. We find that when the subject has attained middle life, when all nutritive processes have reached their climax, especially if there be heredity as a predisposing cause, mental strain, worry and anxiety. I am confident, both as the result of my personal experience, as well as clinical observation, that some subjects have combined two heredites, *tubercular* and *gouty*. The first shows itself in early life, some tubercular joint affection, or incipient tuberculosis of the lungs, overcome by an improved environment, the substitution of hyper-nutrition for a condition of malnutrition, and the gouty diathesis over-rides and stamps out the tubercular. We find in the subject increase in weight, digestive and assimilative power, improved energy and greater capacity for work. We are surprised to see the prognosis of early demise, changed radically to a state in which the subject has a first-class chance of living out his expectancy. I would not be understood to take position as a sceptic as to the causative and infectious nature of the tubercle bacillus, but I ask you to ponder the question *of the anti-germicidal*, yes, *fatal effect upon the tubercular germs of excess of uric acid in the system, finding as it does elimination from the body by every emunctory channel, and mucous surface.*

Of the active causes of lithæmic manifestations, various articles of diet must bear the onus, and this causation varies with different subjects, manifesting itself in various ways, the general proposition that sweets and acids, wines and malt liquors, excess of various kinds of nitrogenous foods, all make themselves known in symptoms ranging from simple discomfort to agonizing pain. Strawberries, or an orange, a raw tomato, or even a little tomato in soup, declaring its effects by a violent erythema on the hands, or feet, or face, itching of the nose, or a furious and tormenting urticaria within a few hours after digestion, sometimes only recognized by a sense of tension or swelling of the fingers, a burning sensation in the toes, or the sense of the shoe being too tight. At other times we find the effete material seeking elimination from the system by the skin, and a furious and intractable eczema, moist and acute, in its manifestations. I treated a lady for an obstinate attack of gout in left foot and ankle. The same time the next year she developed an obstinate attack of acute (moist) eczema in her left arm, resistant to treatment both local and general, a full dose of pilocarpine at night resulted in the most profound exacerbation of the eczema next day, so that she was unable to grasp anything with that hand, and the arm so swollen that it was tense and hard and very painful, and the itching beyond the endurance. Great comfort was given by the application of a strong solution of bicarbonate of soda in cherry laurel water, swelling subsiding and itching and pain relieved, and arm almost completely well in forty-eight hours. I believe this eczema was *lithæmic*, and the pilocarpine temporarily aggravated the condition by a largely increased amount of uric acid elimination. Persistent and distressing itching of the nose will sometimes be the only indication of lithæmia. The digestive tract is a frequent seat of uric acid elimitative irritation. Some of the cases of acid dyspepsia that come under observation are clearly traceable to elimination of uric acid, and not responsive to ordinary remedies. The burning is more intense, there is a *sense of glow* in the stomach, alternating at times with nausea, and accompanied by areas of

*Presented to the Tri-State Medical Society of Virginia and the Carolinas at its meeting held at Charlotte, N. C., January 18, 19, 20, 1899.

itching, flying about from scalp to nose, or face, upper and lower extremities. The subject will sometimes awake in the morning with a nasty, pasty taste in the mouth. urgent desire to go to stool, and will have frequent copious and very acid actions, amounting to fifteen or twenty in the folfowing twenty-four hours, scalding, burning, and very exhausting, with a sense of fainting or goneness. At the same time the urine is scalding, scanty, high colored, and very acid. The condition seems to relieve itself, the bowels becoming quiet so soon as eliminative action is complete. Or the manifestation may be in the form of acute pain in the bowels, most commonly located in the Colon, Sigmoid flexure, pylorus, or some part of the Colon tract, coming on with a sense of depression. Sometimes agonizing cardialgia succeeded by nausea, the pain then becoming fixed in one of the points, the caecum is its most common location, some cases similating very closely Appendicitis. The pain is burning, rending in its character, with a sense of unendurance. It must be felt to be appreciated. The writer has had four attacks of this nature, two being in the caecum, one in sigmoid, and one in the pylorus. It felt as though a mass of hot live coals had been put at the spot, reinforced by a free dose of mustard. After the agony of the early part of the attack had been controlled, the sense of soreness extending over the whole abdomen, was so great as to make even the act of changing óne's position in bed intensely painful. On one occasion, for a week after the attack there was a sensation as though a knife was run into the abdomen, when any jolt came, the rolling of the carriage over the street crossing was almost insupportable. In conjunction with the last and most severe attack located in the caecum, a retinochoroiditis developed in the left eye, making itself felt first by a sensation as if a grain of sand was in the eye, followed by pain and soreness in the ball, and loss of sight up to the point of being unable to recognize any object other than light. The eye was completely restored in ten days after taking a mixture of Strychnine, Dil. Muriatic Acid, and Pepsin. I tried the experiment of a bottle of beer on going to bed at night, awoke next morning with nasty taste in my mouth, crawling, itching sensation of skin on various parts of the body, and painful ringing in the ears. This ringing in the ears is one of the most common manifestations of lithæmia, with or without headache. This latter is dull, persistent, with more or less confusion of ideas, though Haig says its duration is under twenty-four hours. I fully agree as to the other characteristics of it which he describes. My experience of blurred or indistinct vision in connection with these headaches has been similar to his. Nor is this all, interference, with normal metabolism, is a not infrequent cause of lithæmic manifestations; anything causing over nervous strain, business cares or worries, anxiety about a patient, overwork, reacting on the stomach through its nervous supply, interfering primarily with digestion and subsequently with metabolism, will be productive of as well defined evidence of lithæmia as any other one thing. Very commonly associated will be a toprid liver. This organ has failed to dispose of the effete material that should be burnt off. Uric acid accumulates in it, the blood becomes too acid and the undefinable lithæmic symptoms show themselves. Nor will ordinary alkaline remedies bring relief, until the liver and portal circulation have been unloaded by a sufficient dose of calomel, and thus with these conditions described, is it strange we see gouty kidney, atheromatous degenerations of the blood vessels, the development of mental depression, or organic degenerative change in the brain.

Time does not allow for me to go into a more detailed discussion of this subject. You will find it all elaborately treated with the hand of a master by Haig in his work "Uric Acid in the Causation of Disease." But in justice to myself I must sáy, my own clinical observation and personal experience had pointed out to me these clinical facts which I have so imperfectly detailed,

Whether these symptoms are due to excess of uric acid in the system, or whether, as Haig claims, this excess is relative from an interference with the balance, I can not say. He says a certain amount of uric acid is taken in daily with our food, a certain amount generated in the system; that, if the balance is interfered with and not so much excreted as has been accumulated in the organism, that the blood becomes acid, fails to be a solvent and thus uric acid is left in the tissues, joints or deposited in the liver, spleen or kidneys. Just so soon as the blood becomes alkalinized by soda phosphate or the salicylates, it becomes a solvent for the uric acid, it is taken up and excreted from the system. I can testify to the efficiency of soda phosphate and the salicylates, though the latter are apt to disagree with the stomach. Haig says "and lithia . . . though said to be a beautiful solvent of uric acid in the test tube, yet when given to the human subject by the mouth never reaches the uric acid at all, because it forms at once an insoluble compound with the phosphate of soda in the blood, thus removing from that fluid one of the natural solvents of uric

acid, and diminishing its power of holding uric acid in solution." This, if it be true, is a terrible blow to all of the varied lithia waters that have been so much vaunted as remedial in every variety of lithæmia or gout, so far as the lithia salt held in solution is concerned. That water, freely drunk, does much good in the process of elimination, there can be no doubt, but it is because as a solvent it takes out of the system effete matters. Beale says, "water freely drunk, goes into the cracks and crannies of the system and washes out the cobwebs."

In conclusion, the treatment of lithæmia consists chiefly in dietetic regulation and this must depend on each individual case. The value of sodium phosphate, I have already alluded to. The saline cathartics, in full blooded subjects, the purgative waters, especially the Rubinat Condol, the bitter tonics, especially Nux Vomica, and the infusion of cinchona. Strychnia is valuable because it not only improves nervous conditions and digestive processes, but is also eliminative, by its quickening the performance of function in the emunctories. It causes marked rise in urinary acidity, and cures headache (Haig). Exercise is of great importance, walking, horseback, or bicycle. I am inclined to the opinion that the administration of the salycilates should be preceded by a course of pure alkali, as potass, bicarb, until the urine is neutral, and because it makes the salicylates more efficient and diminishes the danger of a subsequent endocarditis, and valvular damage.

In articles of diet, I would especially mention as useful free use of milk. Taken hot it improves digestion, acts as a stimulant to nutritive processes, and predisposes to alkalinity of the blood. Tea, I regard as more harmful than coffee. Its tannin constituent tends to gastric derangement, and thus secondarily interferes with metabolism. Coffee has a tendency to the kidneys, and is, in some measure, eliminative. I would condemn especially, wines, malt liquors, &c., believing that whiskey is least harmful, but even it should not be taken unless there is some factor of debility general or digestive, which demands it, and even then it should be in very small quantity.

Time does not admit that I should go more fully into the discussion of this subject, but if what I have said has excited your interest and given you food for thought I am amply repaid.

210 W. Grace St.

DISCUSSION.

Dr. Geo. W. Long.—I wish to remark that I was very much interested in the Doctor's paper, and don't know that I can add anything of value, at the same time, I would like to speak for myself of the results that have been more satisfactory than any other method pursued, in those cases where I emphasized the dietary regulations, especially the cutting down of meat, nitrogenous foods. I think that is a very important matter in these cases. Of course, we have various phenomena following the excess of uric acid in the blood. We have the trouble, for instance, that is often seen and described under the head of eczema or nettle rash and of course so far as seeking the immediate cause of that would be an emetic then and there of ipecac, and remove the offending trouble and then as to a proper laxative there can be no doubt in my mind. Of course, it is all right to have exercise and plenty of it, and employment, but especially those people who lead sedentary lives, if they indulge freely in nitrogenous foods, my experience leads me to believe that those cases are liable to have rheumatic (?) colic and rheumatic gout, etc. Good results can be obtained from cutting down nitrogenous foods more especially, one-third, two-thirds, or entirely if possible. I don't know how that reconciles with Dr. Upshur's views about the use of milk. I would like to know how that is and to hear from somebody else.

Dr. Hunter McGuire.—I ought to be in a position to say something on this subject, for until not long ago I was disabled, and until very recently I didn't know anything about pathology. I don't believe to-day we know any better how to explain the action of uric acid salt than we did a hundred years ago. I am indebted to the book the writer refered to Haig(?), for most valuable information on the subject that I never understood until I got hold of that book. I think I do understand it now. I never began to get well until I followed the suggestions made by this writer. No one ever tried harder to get rid of anything than I did to get rid of this trouble. No one ever took physic more greedily than I did trying to get well, but the suggestions that this man makes, as soon as I adopted them I began to get better, until to-day so far as I know I am free from gout and can do as much work as I ever did. And his suggestion is very simple. Give up all meat, every variety of meat. I haven't touched meat for many, many months. Give up all coffee, tea, cocoa, because they contain uric acid. Drink milk, eat every variety of vegetable and fruit that you can get hold of. Don't hesitate to eat tomatoes, I eat them whenever I can get hold of them. I don't hesitate to eat an orange. I don't hesitate to drink whiskey when I want it, but fortu-

nately I don't want it very often. Now, that is briefly the way I have recovered my health and gotten rid of this gout. I will suggest another thing, that the nervous system has a little more to do with it than we are disposed to admit. Although I had gout so badly and it lasted so long, attacking my eyes and making me blind for a little while, preventing my reading for weeks and weeks, although I have had it in both feet at the same time, and my knees were all swollen and deformed, suffering horribly, I haven't got on my fingers or toes a trace of it, I haven't got a trace of uric acid. And my gout usually came when I was run down, when I had too many sick people, when I had what every one of you have had, patients who gave me too much anxiety. Cases incurable I never troubled my mind much about after I concluded that nothing could be done, but in cases which could be helped, and a number of them, sometimes eight, ten or a dozen people who would die if I made a mistake, constant anxiety in those cases gave me gout. I never drank wine or beer or anything of the sort, never cared for them in my life, have always been a small eater, always glad to be able to take a small drink of whiskey, and I congratulate myself that I am able to do it now and it does not hurt me. I don't know about strawberries. I don't believe I earned the gout by high living. If I had I would have lost it, for I have lost everything else that I have earned. It must have been inherited. If it was it was the only thing that I inherited that I held on to. I only speak about it because I have had so much personal experience. We might well look and see how much the nervous system has to do in this trouble. It has something more to do with it, I think, than we are usually disposed to admit.

Dr. Paul Barringer.—There is one physical characteristic of gout that has been referred to that is so simple and has probably occurred to most of you, that I hesitate to refer to it, and yet in a purely accidental manner my attention was called to it. I refer to what the doctor referred to as the finger and toe deposits. He also will probably agree with me that the ear is frequently a source of deposit also. I wonder why the foot and the fingers and the ear should be the sources of deposit of uric acid salts. A few years ago a friend came to me and said that he had a hot water heater that wouldn't heat, that it was too small, he could get it to 212 and it wouldn't heat any hotter. In a joking manner I said: "Saturate your water with salt and I think you can raise it to about 240." He did so and had very satisfactory results for three or four days. He came to me in very great distress and said: "My machine won't run." I investigated it and found his radiator solidly packed with sodium chlorate and pure water.

When we consider that the blood at a temperature of 101 or 101½, or some point about that, we have sodium chlorate (?) and other salts of uric acid, that enter the blood, you readily understand that the same blood enters the fingers and finger tips at about 98, 97 and 96, and so on down. As you stand on a cold pavement and your feet become chilled, you see that the fall in temperature is almost 90, it must have gone in the minute arteries of the fingers and toes, and will produce a deposit at that point. Those of you who, on a cold frosty morning, have felt the clip of a passing breeze, know the hypersensitiveness of the ear, and know how it is brought about by the negative circulation. I feel sure that it is the cause of the deposit of the uric acid salt in the fingers and toes. With regard to the joints, I have given the matter some thought, I think that it is due to the fact that it is purely superficial circulation, and that there are in the joints no centers of heat production as is to be found in the muscles, that we have the surface of the joints cooler than the remaining parts of the limbs, and this deposit of uric acid salt around the joints is due to the same cause as that the uric acid entering the blood at 101 will deposit that uric acid at whatever point the circulating fluid passes below that temperature.

Dr. Upshur.—I would like to say a few words in conclusion, and beg the indulgence of the Society for trespassing upon their time. I want to say a word first with regard to the point the doctor made as to milk, as it is a nitrogenous food. I want to premise what I am going to say by saying that one of the things I have always had a horror of all my life was chemistry. It would have been better for me if I had not had this horror of chemistry. I don't ever attempt to look deeply into any chemical discussions, or those things brought about by chemical processes. My views with regard to milk's not doing as other nitrogenous foods would do are based on two facts. The first is the fact of personal experience, which after all is the best teacher. For many years, the last ten or fifteen years, I have at times suffered acutely with these unusual and irregular attacks of gout. Naturally they do set one to thinking. Naturally this question of diet was a subject uppermost in my mind as a solution of this question, both because I believed that the legitimate solution of the problem lay in the direction of the diet, and secondly, because

I believed most profoundly in the Scripture injunction with regard to medicine, that it is more blessed to give than to receive, and therefore, whenever you hear of my taking a dose of medicine you may know that I am in a corner and can't crawl out, so my gouty trouble was treated along the line of diet. Now, my experience with regard to milk, and I drink a great deal of milk that it is the very best thing I can do in the diet line for my gout and I was at a loss to know why it was so until I came across this wonderful book of Dr. Haig (?). I haven't read it all yet. It is very much like fruit cake, you must take a little bit of it at a time if you want to digest it thoroughly. I say this because it is so comprehensive, and a man wants to ponder well what he says and digest it thoroughly, because he will constantly come back to it as a rich storehouse and find something exceedingly useful to him. I find that Dr. Haig lays down as a proposition, certainly not that milk promotes the alkalinity of the blood, here comes to the explanation of milk for this condition of things when I couldn't explain it before, and that is the reason why milk will do this as a nitrogenous food when other articles of food, like a meat diet, will not do it, especially the dark meats, promote the development and retention of the uric acid in the system when milk does not, because of the fact that it alkalinize with the blood and at the same time tends to promote elimination through the kidneys.

Now, there is another fact that is exceedingly interesting to me which Dr. Haig lays down, that in every system, in the morning a cleansing should take place, that it is a time as it were of cleaning up the house. The urine is highly colored and there is a great amount of uric acid in the system, the alkaline tide sets. The whole organism should get ready for the battle of the day. Then the question as to other articles of diet. The experience which Dr. McGuire gives with reference to tomatoes and oranges, which I touch very cautiously. It is undoubtedly true that what is one man's food is another man's poison. Strawberries are absolute poison to me, and I have seen over and over again cases where they produced gout or brought it back after it had been seemingly cured. I assure you I would as soon touch poison as one of them. I have had little tingling gouty sensations in my fingers within an hour after eating an orange or tomatoes. Now, I will go a point further, and this is a point in which I have to disagree with Dr. Haig. Relief doesn't always come in the line of a vegetable diet. There are conditions of the stomach which we might call vegetable dyspepsia. You take the first step in the direction of digestive disturbances and when you do that you at least negatively establish the fact that there is to be a retention of uric acid in the system, and interfere with its elimination and you may have well declared gout as a result of that condition. Now, there is no question of the fact, but that the nervous system is a factor in its existence and in its potency, for producing the gout—not the gout that the Englishman has where he has his toes all swollen up and uncomfortable as a result of his high living—but where you have it in these parts, is a vague and ill-defined symptom of lithemia. I like the term lithemia better than that of gout, and there is a distinction. Lithemia is American, gout is English as a result of high living. Lithemia comes to the Americans from the tense condition of the nervous chords. It is the old story of straining the lute up to the point where there comes a rift, and the music is all mute. Many a man has died suddenly, as a result of apoplexy or of organic heart trouble and the trouble has been the blood vessels of the brain or in some organic change, it may be the deposit of chalk upon the valves of the heart, and primarily the cause of that man's death has been his lithemic condition. I believe there is nothing we should guard so carefully as this nervous condition. Now, as pure fact, personally while I have had rarely or never any of the joints troubled, I have scarcely got a joint in either hand that I haven't got with the marks of lithemia, and in the ball of that thumb I have got a little globular mass that rolls around it like a marble when I press on it, and yet I have never had an attack of gout in a joint in my life. With regard to eggs, I would say it is true with these as with regard to other articles of diet. Eggs have the reputation of being very digestible, but in my experience I have found them very indigestible. I constantly find patients who can't take eggs, they disagree with them and are a source of trouble.

Finally, one word with regard to colchicum. No one here will deny its useful properties, because it exercises some remarkable powers. I very rarely give colchicum to a patient. It is a thing that is apt to leave the digestion unimpaired. Usually colchicum is objectionable to take, and I very much prefer to find a solution through other therapeutic lines, and the phosphate of sodium is peculiarly happy in its influence for the relief of these conditions.

Medical Examining Boards—Especially those of Virginia and North Carolina.

By A. S. Priddy, M. D., Ex-Member Virginia State Board of Medical Examiners, Keysville, Virginia.†

It is with great pleasure and satisfaction that we, the representatives of the medical profession of Virginia meet our brethren of the Carolinas in this hospitable and progressive city of historic old Mecklenburg county whose people gave the first expression to the sentiment that the American colonies were fit for their own independent self-government and would have no other. North Carolina, adjoining the confines of Virginia for nearly 300 miles, without any natural boundary or barrier, and being first settled by Virginians, has, in times of war, always been found shoulder to shoulder with our people, and in business pursuits in time of peace has been our fair competitor. So strong and numerous have been the allied interests of the two States that I am very much disposed to accept as true a tradition relaetd some years ago by Gen. Jubal A. Early at a Confederate Veteran reunion in Richmond that in the early part of the Eighteenth century a commission headed by Col. William Byrd, of Westover, met a like commission on the part of North Carolina to designate the boundary line of the two States or rather Colonies, so great was the desire of Virginians to be North Carolinians, and vice versa; and having partaken freely of the hospitality and conviviality which always attend meetings of Virginians and North Carolinians, they spent much time in losing the even supposed line betwen the two States, and to this day the citizenship of many inhabitants of the country aforesaid is a disputed question. I hail with much joy this meeting as the means of bringing into closer touch the physicians of Virginia and the two Carolinas, and of effecting an organization for the mutual good of ourselves and the people, of whose lives and health we are in a great measure the custodians. So when our committee on organization honored me with a request to prepare a paper on some medical subject of interest to this Society, I had no trouble in deciding that a talk about the Medical Examining Boards of Virginia and North Carolina would be of more general interest than any with which I was familiar, and inasmuch as Virginia and North Carolina were the first States to enact laws constituting State boards of Medical Examiners, I have written my paper with special reference to them, with no disparagement of South Carolina, who has followed her two sister States of this society, and even though her medical law is not so old, I am informed it is doing a good work for the people and the profession of the State. It is a perfectiy piain proposition that the public safety is dependent upon the public health, and public wealth, or upon capable and conscientious physicians, for no nation can attain and hold high rank as an intellectual and political power whose citizens or subjects are under influences which tend to enervate and to make physical wrecks of them. The decadence of some of the greatest powers of the world has been due to these causes. In our immediate time we have seen the great Chinese nation go down in disgrace, almost before the little army of "Japs" and nothing, in my opinion, contributed more to this result than the habitual enslavement of the Chinese people to the use of opium for generations. It passeth all understanding how an intelligent and enlightened people whose capacity for dealings with those complex and trying questions which confront nations has won the respect and admiration of the world could so long commit the lives and health of those dear to them to the care of a class of people whose legal requirement for fitness to practice the healing art was the possession of sufficient money to pay the license tax and even this was not a prerequisite in all of the States. So great was the popular indifference and in many cases prejudices against regulating the practice of medicine by law, it being regarded as a scheme for the formation of a combine of Doctors that the people continued to elect and re-elect Legislatures which would bequeath to the coming generations large "Acts" of their legislative work filled with such laws as an "Act to protect fish in the waters of a Chickahominy or a Currituck," but with no act to protect the people against that illiterate, ignorant, or unscrupulous class which, under the title of Doctor of Medicine, in some cases self-designated and in others *lawfully* acquired by the sojourn of a few weeks at, and by the payment of a small amount of money to, some of the numerous Medical Colleges as the purchase money for a diploma. That the physicians of America without any legal compulsion have for the most part been honest, faithful and capable men, that and many of them have attained the highest positions among the great men of the world, are tributes to American honor and manhood rather than to the requirements of public policy by law.

†Read before the Tri-State Medical Society of the Carolinas and Virginia, in Charlotte, N. Carolina, January, 1899.

It has been ever thus in the world's history that mankind would reject the kind offices of those laboring unselfishly for mankind's good. Under this prolonged chaotic condition, men tóo lazy to earn an honest living by manual labor, others too wanting in education and intelligence to win footholds in any of the other learned professions, found easy admission into the ranks of the medical profession.

So great became the demand for Medical Colleges of slack requirements and of low priced tuition, that most of the large cities abounded in institutions, which vied with each other in graduating the largest classes on easiest terms. These so-called graduates under the protecting Ægis of a diploma were turned loose on a gullible public. It was against this class, more than against the traveling fakir who boldly sold his nostrums on the streets and court-green that public protection was needed, inasmuch as the average nostrum is more efficacious from the talismanic charm of secrecy in its preparation than from the possession of any drug good or bad in its composition.

It is indeed a sad commentary on the weakness of human nature that people who are the most exacting as to securing the best of everything in business details, even to the best blacksmiths for shoeing their horses, will blindly follow the advice of charlatans in dealing with the infirmities of their own bodies. In view of this indifferent and uneducated condition of the public mind on these important matters, the few faithful members of Medical Societies of Virginia and of North Corolina, who, though repulsed for many years, kept up their fight for a medical law, should congratulate themselves and should merit the eternal gratitude of the people of the two States for having secured in 1884–5 the passage of laws regulating the practice of medicine and surgery by constituting a State Board of Medical Examiners, the first in the United States, even though their powers were somewhat limited.

The position of member of such a board is a responsible and trying one—the member is an officer for the faithful execution of the law and at the same time he is called on to obey the unwritten law of discretion (which is as strong, though frequently somewhat conflicting) as the written one. So well did the societies select the members that the successful working of the law is due to them, whereas they might have fixed the seal of public condemnation not only on medical laws in those two States for it was but an experiment watched by them all. As a licentiate of one of the first examinations by the Virginia Board, as a member of committee to get the law amended by the Legislature as a member of the Board for five years, and as the patron of the present law while a member of the Virginia Legislature I can testify to the improvement in the personnel, in the preliminary education and in the professional education of those who come before the board. The people of Virginia now value it as one of the most prized of State institutions and I am informed that the same may be said of North Carolina.

The first examinations revealed a deplorable state of affairs: To quote an extract from a recent paper of Dr. Landon B. Edwards before the Medical and Surgical Society of D. C. "The results of the earlier examinations were simply alarming. Over 50 per cent. of these reputable medical colleges failed to pass satisfactory examinations although the markings were extremely liberal and the required standard only 73 per cent. "I know myself that for several years the papers turned in have been, for the most part models of neatness and orthography, whereas in 1885–6–7 many graduates of reputable colleges turned papers in in which the ignorance of medicine and surgery was conspicuously equalled by bad spelling and by most flagrant violation of the common rules of English grammar. Some good papers, as far as the knowledge of the questions was concerned, were greatly damaged in this way.

The good work of our Boards has, like the scriptural grain of mustard seed, extended the branches of its influence into nearly all of the other States; a State which cannot now boast of a medical examining board of some form is indeed in the backwoods of provincialism. The boards are working with a common purpose of reaching a uniform standard of grade in examinations. The medical colleges for the most part have taken advantage of the experience gained from boards and have formed an organization known as the Association of American Medical Colleges which require a rigid examination of all matriculates on the academic branches and a four year course of study; courses in chemical, bacteriological and physiological laboratories are compulsory parts of the course. Reference to the records of the Virginia board shows that colleges whose percentage of rejected graduates on the early examinations was as high as 50% now show a reduction to 15% or 20%. Although so much has been accomplished within the last fifteen years there is much yet to be done ere the boards reach the state of perfection for which we all most devoutly wish.

The medical societies should remember at

all times that the Boards are creatures of the Societies and they should work for their betterment and in every way uphold their hands. They should see that their best men are selected for members of the Board, and that no one is elected who does not work for and keep well up with the medical society of his State. In many remote localities the law is being openly violated by men who disregard and defy the law, or who evade it under some subterfuge. Now the boards have neither time nor money necessary to visit the neighborhoods and conduct a personal prosecution of the offenders and it is a duty of every lawful physician in the profession, and of the people, to bring these cases to the attention of the proper officers of the law and to aid in punishing them as well as in purging the locality of such cattle.

There is a highly objectionable feature in our law which permits undergraduates to appear before the boards, and the profession should take steps to have the law so amended that each and every applicant must present a diploma from a reputable college before being allowed to commence the examination. Some claim to be graduates of schools which they never have seen, and thereby an injustice is done the schools while a great many register as undergraduates, usually second course students, who wish to get the dread of an examination from their minds, and to whom failure and repeated attempts to pass the board do not mean the same as to a graduate. A large percentage of failures occur in this way, and an enormous amount of work and worry is entailed on the board. I am certain the real intention of the designer of the law was that only those should be examined who are ready and intend to enter practice and the law should certainly be made to read that way.

A question which has been much agitated in the different State boards and in the National Conference of Medical Examining Boards, has been the one of recognition of certificates of other boards, and as yet nothing has been accomplished along this line. Some object to it because of the lack of uniformity in standard of examinations by different boards, while others have opposed it for constitutional and legal reasons. I, myself, think that at present it would not be proper for such a general arrangement, but as far as Virginia and North Carolina are concerned there are especial reasons and conditions which suggest such an arrangement: In the first place, our laws are practically and essentially the same. A careful comparison of the results of the examinations for many years tends to convince most any one of the equality in standard of the two boards. While I am not a lawyer, yet I am thoroughly familiar with the Virginia law, having introduced it in the legislature; and I have also studied the medical laws of North Carolina, and I fail to find one line in either which will cause even the strictest constructionist to contend that the by-laws cannot be so arranged that special courtesies can be extended licentiates of one board by the other. Of the more than 600 medical students who annually attend the three schools of Virginia, a large percentage is represented by North Carolinians; and all three schools have honored themselves by calling distinguished North Carolinians to chairs in each. Many North Carolina graduates remain with us, and become adopted sons of the Old Dominion, while as many Virginians are induced to become citizens of the Old North State, by the seductive influences of your hospitality and enterprise. Between no other two States of the Union is there greater social, business, and professional intercourse than between these two States. I hope that the two boards may be brought into closer touch, and that in a short while the certificates of one will be recognized by the other and that they may continue to work for the perfection of the great work in which they have so long taken the lead.

Tubal Pregnancy.†

By Virginius Harrison, A. M., M. D., Lecturer on the Practice of Surgery, University College of Medicine, Richmond, Va.

I cannot fail to believe that many women lose their lives each year from undiagnosed tubal pregnancy, having their death ascribed to various indefinite causes which are supposed to produce sudden death. This will be more emphatic if we recall the cases of tubal pregnancy that come under surgical care with a false diagnosis. Knowing of two such cases occurring within the past six months, I am prompted to write this paper in order to elicit a discussion of this subject, especially in regard to its diagnosis; for we who see these cases first are often as much responsible for the outcome of the case as he who applies the first dressing to the perforated abdominal injury.

Case 1.—Mrs. P., age 24, white, one child two years old. History: Tubercular, painful menstruation from the beginning. On vaginal examination was found to have

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tubal disease on both sides. Operation advised but declined, with the hope that delay would bring relief. After an unusual painful menstruation in October, 1896, decided to have the operation performed. Soon, however, symptoms of pregnancy developed and I advised waiting. In November she did not menstruate. I did not examine her, nor did tubal pregnancy occur to me until December 6th, when she was taken with a sudden pain in the left side. She was removed to the hospital that evening and operated on the next day. On opening the abdomen, a large quantity of dark blood escaped and continued to do so until the tube on the left side was secured. The pelvis was filled with clotted blood. The tube was ruptured, filled and distended with clots of blood. The ovum was not found. The diagnostic points were sufficient to pronounce it tubal pregnancy. The tube and ovaries of both sides were removed as they were diseased.

Case 2.—On June 18th, 1898, I was sent for to see Mrs. ——, age 36, white. Personal history excellent. Had had three children, the youngest three years old. The object of my visit was to do something to stop her "sickness," which had been on her for about nine weeks. I brought out in the consultation that at the beginning of the attack she had suffered a great deal of pain in the region of the right ovary, which had lasted for several days; this was relieved by morphine. About a week later, she was seized by another similar attack, and suffered from nausea both during the attack and for a short time afterward. I made a vaginal examination, which revealed a large mass in the right side of the cul-de-sac, which felt like a cystoma of the right ovary. I told her what I had found, and that it might be tubal pregnancy, and advised immediate operation. She decided in a day or two to have it done, and went to the Virginia hospital, where, on June 25th, 1898, I removed this specimen from the right side. On the left side, I found a large cyst of the ovary, which I also removed. This mass is the prettiest specimen of tubal pregnancy I have ever seen, and is complete in all its parts. You will notice the fetus, a little disturbed by handling and the fluids; notice the eyes, mouth, chin, prolongations for hands and feet. The umbilical cord leading to the placenta. Immediately outside of the sac you will observe the blood clot from the hemorrhage at the time of rupture. This is surrounded by lymph thrown out by nature to protect the peritoneal cavity, the outer part of which has become organized. The patient left the hospital entirely recovered in three weeks after the operation.

Case 3.—White, age 30, married five months. History, dysmenorrhœa, had had the cervix dilated with no apparent benefit. Six weeks before I saw her had had a severe attack of pain in the right side of her abdomen which was relieved by morphine and rest in bed for several days.

She came to this city and was seen by me on October 29th, 1898. Her condition was such as to make me suspect typhoid fever. In the evening of the 31st of October I was hastily summoned to see her, and found her in great agony, the pain being referred to the lower part of the right side of the abdomen. Some shock, but not severe. Pulse 120. Temperature 102 deg. F. Rigidity of the right side present, but not marked. I was not able to differentiate the cause of her trouble, but considered it either tubal pregnancy or appendicitis.

Morphine was administered hypodermically and salts by the mouth. I saw her early the next morning, and her condition was going from bad to worse. The rigidity had markedly increased, as had the temperature and pulse. She was immediately removed to the Virginia hospital. As she had been a surgical patient of Dr. Hunter McGuire he was called and we operated on her that morning.

Section revealed the intestines matted and covered with lymph, beneath which we found a large suppurating mass in the broad ligament with the tube adherent immediately above. The case was considered one of tubal pregnancy, which had ruptured into the broad ligament six weeks previously, and had now become infected.

Owing to the necrotic condition of the sac and the ligament we ruptured the abscess in delivering it. The general peritoneal cavity had been previously walled off with sterilized strips of plain gauze. The pelvis was drained by a glass tube and gauze strips. The tube remained in for 36 hours, the gauze for one week and renewed daily as long as drainage was kept up. The temperature and pulse ran a septic course for a week. Concentrated nourishment, strychnia and the rectal use of the saline enemata enabled the patient to overcome this, and in eight weeks the wound healed and the patient well.

History.—The study of this subject is not a new and untrammelled road. On the contrary, Albucasis described his first case in the middle of the eleventh century. Baynham, of Virginia, did an operation in 1790, and another in 1799, both successful. About this time other pioneer operators did successful work.

Since Lawson Tait performed his first successful operation for ruptured tubal pregnancy in 1883, a new era has dawned and much has been written on the subject until now there is hardly a journal that does not report some successful operation. When we all have learned to diagnose tubal pregnancy, to find one going beyond the fourth month will be a surgical curiosity, and the discussion of the late treatment will be then unnecessary.

Etiology.—Concerning the etiology of tubal pregnancy, many theories have been advanced, but none have been generally accepted as definite. Nor is this likely to occur until the exact[3] location of the meeting of the ovum and spermatozoa has been satisfactorily demonstrated. Tait and Sutton[3] both believe that this occurs in the uterus. Minot[3] says: "Nothing positive is known as to the site of impregnation in the man, but there is no reason to suppose, as is unfortunately done, that the site is variable, or different from that in other mammalia." Hertwig and Minot[3] admit that impregnation takes place in the oviduct in placental mammals.

The most plausable theory, and one that will be recognized until proof of a better, seems to be some mechanical obstruction in the Fallopian tube to the ovum on its journey to the uterus, but not sufficient to prevent the spermatozoa to pass to the location of the ovum. Whether this obstruction is due to the tortuous condition of the tube, or diminution of the calibre by bands or tumors or lesion of the epithelium lining the tube, are the points much discussed, and still undecided. A case is reported by Williams and Salman[3] in which there was no apparent condition in the tube to account for the tubal pregnancy. The statement generally met with that tubal pregnancy is more often found in women who have been sterile for several years needs some qualification.

"It may occur," according to Mr. Treves,"[4] "in the first pregnancy in woman who have been married from eight to twenty years. May follow a normal pregnancy or an abortion, in a newly married woman or a mother of a large family. Both tubes may be pregnant at the same time or at different times." You may have at the same time intra- and extra-uterine pregnancy.

Varieties.—It is not my purpose to enter into a discussion as to how many varieties and sub-varieties we may meet in operating, for the treatment varies but little. I will accept the opinions as held by Mr. Tait,[2] Treves,[4] Lusk,[1] Price,[2] *et. als*, that all cases are tubal at first, and all others are produced by abortion or rupture of the tube. The *possibility* of a pregnancy commencing in the ovary or abdomen is admitted by Greig Smith, *et. als.*

Pathology.—We owe a great deal to Bland Sutton and Tait for what we know of the pathology of tubal pregnancy. The changes which occur in the tube as it enlarges is due to an increase in the vascularity, and not to an increase in the number and size of the muscular fibres, as occur in uterine pregnancy. The walls of the tube become thinned and thereby weakened. The fimbriated extremity narrows, so that by the eighth week the abdominal opening is closed. Before this abdominal osteum closes we may have either rupture of the tube or tubal abortion. By tubal abortion we mean that the pregnant contents of the tube has been expelled through the fimbriated extremity into the abdominal cavity.

Rupture of a tube is said to be primary when it occurs between the third and twelfth week, and to be secondary between the twelfth week and the full term. The rupture may take place into the peritoneal cavity, or[1] "between the folds of the broad ligament, i. e,, outside the peritoneal cavity."

Joseph Price[6] referring to the extra-peritoneal variety, makes this statement: "I have not, it is curious to remark, observed a so-called intra-ligamentous variety of this condition, and accordingly am somewhat sceptical as to its frequency and correctness of the pathology advocated by Hart and Carter, as shown by frozen sections."

At another time and later in a paper on Surgery of Tubal Pregnancy, he says: "I am convinced by my own surgical experience that ectopic pregnancies are always tubal, that they rupture and end in some variety of intra-peritoneal mischief."

In the American Text-Book of Gynecology, the American Text-Book of Obstetrics, Abdominal Surgery by Greig Smith, System of Surgery by Treves, and other books, we will find the extra-peritoneal variety described. Therefore I will consider the subject under the two varieties of rupture, at the same time granting that there is some doubt as to the existence of the extra-peritoneal variety.

The point of attachment in the tube of the placenta is an important one as regards the result of the rupture to the mother. If the placenta is situated in the upper surface of the tube, and the rupture occurs in this locality, the placenta is apt to be detached in whole or part, in addition to tearing the increased vascularity of the tube, making a fatal issue from primary hemorrhage more probable. On the other hand, if the placenta has located itself on the floor of th

tube, so to speak, it would be undisturbed by a rupture in other parts of the tube, and if the rupture occurred in the floor, the resistence of the dense tissues of the broad ligament would soon exert sufficient pressure to control the hemorrhage. The causes of rupture are often slight, such as a misstep, straining, hemorrhage into the sac, sexual intercourse has been known to produce a rupture, and of course the natural growth of the ovum with the stretching and thinning of the tube wall. Usually *a primary* intra-peritoneal rupture is followed by death, due to hemorrhage, without the immediate intervention of surgical aid. Should death not occur, and much blood escapes into the peritoneal cavity, it soon collects in the cul-de-sac as a pelvic hematocele. The date of rupture determines the amount of blood lost (in a degree) and whether the ovum is to escape into the abdominal cavity. After the[7] seventh week the ovum rarely escapes from the tube, but more blood is lost, as the sac walls are prevented from contracting by the retention of the ovum. Mr. Tait and Dr. Joseph Price believes that every case of pelvic hematocele is due to ruptured tubal pregnancy. In the early weeks when the ovum escapes from the tube, and the placenta is not destroyed, the fœtus may develep to term, and the patient pass through a spurious labor, and the fœtus may mummify, saponify—a lithopædian be formed by calcification or suppuration may take place, and the sac open into the bowel, bladder, vagina, or even through the abominal walls. I recall a case where suppuration had taken place, operated on ten or twelve years ago. The patient had carried the tumor for nine years, it finally opened into the rectum through which fœtal bones were passed. Then it was that she came to Dr. Hunter McGuire who removed the remaining bones.

There are other varieties described by some authorities as a separate class, but for practical purposes those I have named will be sufficient. The extraperitoneal rupture of the tube, as has already been mentioned, is not primarily as dangerous to the patient, though a secondary rupture may occur with all the dire consequences of internal hemorrhage and septic peritonitis. According to Bland Sutton, "this rupture occurs after the death of the fœtus, and is, in nearly every case, induced by suppuration of the sac." When the rupture of the tube has occurred without the escape of the ovum, nature often comes to the rescue and builds a wall of lymph around the ruptured sac, to prevent its contents from invading the peritoneal cavity. This lymph may become organized as was shown well in a case I recently operated upon. Tubo-uterine or interstitial pregnancy is not a true tubal pregnancy, for it occurs in that portion of the tube which passes through the uterine tissue. The changes in the sac are not like the true tubal variety, though it may rupture into the abdominal cavity, and it may occur at a much later date than in the variety already described. Tubo-uterine gestation may terminate by rupturing into the uterine cavity and be discharged per via naturalis.

Symptoms.—The symptoms of tubal pregnancy vary with the period. During the first month or six weeks the ordinary symptoms of uterine pregnancy may exist. In other cases we may not find the history so complete, in fact but meagre signs will be obtained, and until the colicky pains occur the physician will not be consulted. These pains may never present themselves until the time of rupture, as was true in H. I. Boldt's[8] three cases, one of which ruptured in his office waiting room. If the physician is consulted when these pains occur or at the time of rupture, he will elicit that there has been some change in the menstrual function—there may be a diminution in quantity or a shorter duration, and shreds may be passed. The breasts are sensitive, morning sickness present. She or her friends will tell you she was as well as usual, until the colicky pains commenced, or after a slight exertion there was a sudden sharp pain in one side of her abdomen, and she became very faint. If you see her soon after the rupture you will find her more or less profoundly shocked, and often impending death will only be averted by an accurate diagnosis, and a prompt and bold surgical intervention. If the hemorrhage has not been large, or the shock great, she will soon rally, and will consider these symptoms were incident to a miscarriage which she has had, as now the uterus commences to throw off the decidua with a flow of blood, and the patient will feel as well as usual until taken with a secondary rupture within a few hours to a few weeks.

On vaginal examination before rupture, little can be done in making a positive diagnosis, yet with the concomitant symptoms we can give a very probable diagnosis. After rupture has taken place, we can either feel the tube enlarged, boggy, exquisitely tender, situated a little behind and to one side of the uterus, pushing this organ forward. Or we may feel the cul-de-sac filled with blood, according to Joseph Price, a diagnostic sign of ruptured tubal pregnancy. The abdomen may be distended and tympanitic due to the floating up of the intestines by the blood of the pelvis.

If the fœtus lives to full term, sooner or later after the rupture you will be able to make out its form and position in the abdominal cavity. There will be an increase in the size of the abdomen, usually on one side or the other, in contra-distinction to the median enlargement of uterine gestation. This lateral enlargement is independent of the uterus, which can be felt in front of and to the opposite side of tubal enlargement. At term the woman will go through a spurious labor and may fool both patient and doctor unless the history of the case has been inquired into. After the labor has subsided, the tumor will decrease in size, and the changes already mentioned may take place.

Diagnosis.—The fate of the patient often depends upon a correct diagnosis, and this to be made promptly, for as Lusk has aptly said: "The resources of surgery are rarely successful when practiced upon the dying."

The diagnosis before rupture is seldom made except by accident, though some cases have been reported. One case I remember was diagnosed by Dr. Hugh M. Taylor, of Richmond, Va., and at a subsequent visit, while advising the necessity of an operation, the tube ruptured. Dr. Taylor's was, however, a unique experience.

The clinical history of a change in the menstrual function, either in quantity, character or time of occurrence, the breasts becoming sensitive, morning sickness present, colicky pains in one side of the abdomen, would give sufficient data to give a probable diagnosis of tubal pregnancy; particularly is this the case when on vaginal examination, you find the tube enlarged, tender, and boggy. Any or all these subjective symptoms may be absent, and no one, not even the patient, suspect her condition, until she is seized with the sharp pain in one side of the abdomen, the lips will pale, the pulse will be rapid and feeble, the skin bathed in a cold clammy sweat, in fact all the symptoms of shock and internal hemorrhage, more or less profound, according to the amount of blood escaping into the peritoneal cavity. When the hemorrhage has been large the temperature will be sub-normal. With these symptoms present, and by vaginal examination revealing the position of the boggy enlarged ruptured tube, or the cul-de-sac filled with blood, there is only one condition that it could be mistaken for, and that is rupture of a tube containing pus. The ruptured pus-tube would give a more persistent pain, rapid rise of temperature, and the symptoms of internal hemorrhage probably absent, with certain absence of the clinical history of pregnancy.

If the case is seen some time after rupture, the diagnosis can (only) be made by the history of the case, and vaginal examination, though even now the diagnosis will not always be clear, as will be seen in the two cases I report.

Treatment.—This part of the subject will have to be considered under several heads, as the condition of the patient and fœtus varies with the period of gestation.

The treatment naturally divides itself into the method (a) before rupture, (b) at the time of rupture, (c) after rupture up to the fourth month, (d) from fourth month up to term, (e) after spurious labor.

The treatment by electricity has had some warm advocates, and even now some good surgeons advise its use, particularly before rupture occurs, with the hope of destroying the ovum. Those who advocate this measure do not expect to meet with uniform success, while others claim that the method is both uncertain and unsafe. Inflammatory action has been recorded after the use of electricity. Even should the fœtus be electrocuted we have the conditions remaining for another ectopic gestation, and a foreign body that may become infected, and necessitate a more serious operation. On the other hand, an abdominal section before rupture in uncomplicated cases, is the work of a few minutes, a simple procedure, and should be attended with almost no mortality.

Mr. Treves in his System of Surgery considers no other save the operative treatment. Greig Smith, in his work on Abdominal Surgery, says, "the position that electricity holds, at present, as a plan of treatment in extra-uterine fœtation is, that it is suitable in the early stages, where it is not very dangerous, and is followed by an encouraging degree of success." Continuing in the same paragraph, he says, "it must be noted that in these early stages the diagnosis is uncertain; that the stimulation of an electric discharge may induce rupture, and that the danger is not over when the fœtus is killed. It may not destroy the vitality of the placenta." This latter statement was illustrated in one of the cases already quoted from Dr. Boldt. The case was not diagnosed correctly at the first visit, and Dr. Boldt considered the patient suffering from a return of endometritis, from which she had suffered several years previous. Consequently he applied a 50-milliamperes current for ten minutes on Monday. Friday, when she returned for treatment, she was seized with the pain while waiting to see the doctor. "This illustrates the unreliability of the galvanic current in such cases. The embryo was not

killed or the rupture would not have taken place."

The uncertainty of the results I think should be sufficient to condemn this method of treatment. The evacuation of the liquor amnii by aspiration or incising the cyst through the vagina has fallen into disuse on account of many more failures being recorded than successes. The same may be said of the injection of fluids into the sac, in expectation of destroying the foetus.

Elytrotomy, or the vaginal operation for tubal pregnancy, is advocated by men whose opinions command respect, yet it seems to be too uncertain as well as unscientific. We cannot with certainty predict the conditions in the abdomen until it has been opened. The intestines may be adherent to the sac, or the sac to any of the pelvic organs. To attempt to relieve these adhesions by the vaginal route, would certainly be working in the dark. There would be a great risk of tearing the viscera, and of causing hemorrhage that will be stopped with great difficulty, if at all, and the danger of not removing all the diseased tissue. In this day of progress, surgery tends towards radicalism, or in other words, complete work. This I think will rarely be done save in the very simple cases by the vaginal route. I have advocated none of these methods, for I consider the treatment before rupture by an abdominal section to be the ideal one. Unfortunately we meet with but few that are diagnosed at the time.

The treatment at the time of rupture varies with the condition of the patient. The effect produced by the rupture may only be moderate in degree, and the patient already recovering from the shock when seen by the surgeon. If such is the case a short delay to prepare for an aseptic operation is justifiable and demanded. Do not put off longer than is necessary, for a repetition of the hemorrhage may occur at any time.

We may not find at the first visit such a happy condition of our patient, in fact, her condition may be alarming, not only requiring an accurate diagnosis but the prompt action on the part of the surgeon if the acute anemia is progressing or even not improving.

The use of the normal salt solution by infusion either direct into the vein or under the skin will here find a happy application, and will no doubt aid in saving many lives. Certainly it will do much in keeping the patient alive until the preparation for the operation has been made. The indication for treatment at the time of rupture can but be to open the abdomen and in the one case to remove the ruptured tube to prevent future hemorrhage in the near future, and in the other to secure the bleeding vessels by removing the tube.

If the rupture is extra-peritoneal, the case is not likely to be so urgent, the pressure of the layers of the broad ligament will soon control the bleeding. If the fœtus is destroyed at the time of rupture, very little, if any increase in the size of the pelvic hematoma will occur, consequently there will be very little danger of secondary rupture. The operation can be deferred until every thing has been prepared for an aseptic section. Should, however, infection from the tube or rectum occur, the hematoma must be removed at once.

If the fœtus continues to live and develope after rupture in the broad ligament, the patient is in danger of the consequences of a secondary rupture at any time. The indication here is for the early operative intervention. Some claim this to be the time to use electricity. Its use here has been followed by failures, and a case has been reported where the application of electricity caused rupture with a fatal termination before the preparation for an abdominal section could be made. In these cases of intraligamentous gestation, as they are sometimes called, with the fœtus living, and hourly threatening to rupture, we will meet with a varied condition of affairs in operating which will tax the ingenuity of the surgeon to the utmost. Yet the results will not be near as disastrous as allowing secondary rupture to occur. The disposition of the placenta is the bane of the operation. After the fourth month and up to the spurious labor or term, we meet with another serious condition of affairs, which requires acute discernment on the part of the surgeon to advise the best treatment. Here we have a living child, growing day by day, and the placenta enlarging, adding to the gravity of the condition of the patient, should operation be suddenly demanded. Without serious trouble these cases sometimes go on to full term through spurious labor,—the child dies, the amniotic fluid absorbs, and the circulation in placenta ceases. If we were certain all cases would so happily terminate, we would not hesitate to advise the expectant plan of treatment. We cannot promise such results, so I must advocate the removal by abdominal incision as soon as diagnosed, unless otherwise contra-indicated by other conditions in the patient. Should you decide to defer operating, the patient must be carefully watched, and when untoward symptoms present themselves, resort to immediate extirpation of the pregnancy.

The chief danger of operating after the

fourth month is from the placenta. To leave it *in situ* it may become infected, and be a source of great danger. To remove it subjects the patient to a very great risk of a fatal hemorrhage. During the operation we may find the placenta attached just where we wish to make the incision in the sac, or we may dislodge it accidentally. We are not justified in attempting to remove the placenta unless we are certain we can control the feeding vessels. Some surgeons advise that we cut the cord off close to the placenta, sew up the sac, with the hope of the absorption of the placenta, and if this does not occur, to do the secondary operation for its removal. Other surgeons advise us to bring the sac up and sew to the lips of the abdominal wound, leaving the cord protuding through the opening in the sac, so that the placenta can be removed when detached. The sac is of course packed with iodoform gauze.

After spurious labor when the child is dead and the circulation in the placenta has ceased, the operation is not so hazardous. It is hardly necessary to say that this abnormal condition should he removed. The route of removing must be determined by the case. If in close proximity to the vagina and attached, it may be removed per vaginam, particularly would this be indicated if supuration has taken place. As a rule, however, the ventral incision will be better. If the case is extra-peritoneal, it may push the peritoneum up to such an extent as to strip it from the abdominal parietes and enable the operator to remove the abnormality without opening the peritoneal cavity. The incision in this case should not be made in the median line, as the peritoneum is often attached here, even when stripped off latterally.

Having considered the various conditions and the indicatious for treatment, I think you will all agree with me in regard to the importance of the subject, and especially in regard to the diagnosis and early operative intervention. It is only delayed surgery that gives us these late cases to deal with. We all appreciate the dire consequences of delay in appendectomy. Let us be equally on the alert for this condition, and operate when any tyro in surgery should be successful.

REFERENCES.

1. American Text-Book Gynecology.
2 Surgery of Tubal Pregnancy. Joseph Price. Journal.
3. American Obstetrics, June, 1898. (Bland Sutton quoted by Williams & Salmon.)
4. System of Surgery. Treves.
5. Abdominal Surgery. Greig Smith.
6. The Present Status of Abdominal Surgery. Joseph Price.
7. Bland Sutton.
8. American Journal Obstetrics, June, 1898.

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Typhoid Fever, Diagnosis and Treatment.†

By Rolfe E. Hughes, M. D., Laurens, S. C.

If I could consistently think that your patience in listening to me would be rewarded by impressing you with any very new, valuable or radical suggestions, then indeed with great calmness, I would exultingly treat at length the subject I have before me; that of Typhoid Fever, its Diagnosis and Treatment; but I realize, being upon a well beaten path, one that has been ably traveled by many eminent Diagnosticians before, and certainly I would shrink from even treading cautiously upon a way so hard and worn, but for my enthusiasm inspired by the organization of this society, and seeing I am accompanied along the route by the most eminent men of three States. Most of the Virginia gentlemen present are personal friends, North Carolina's Sons are our entertainers and the Palmetto State,my adopted home, is well represented, so I at least expect leniency of criticism, and should I lose my way, attribute it rather to a want of time for gathering full directions, and place me on the right route.

It is useless for me to add how honored I feel at being allowed to appear before a Medical body of as high character as the Tri-State Society, and be permitted to participate in its scientific deliberations. 'Tis a happy moment for me and I shall ever remember gratefully and pleasantly these distinguished privileges, for aside from the real and scientific part, there is something inspiring and touching, to see a congregation of medical men discussing the ills of mankind and the best possible means of combatting them.

Man is heir to many troubles, our life work is the study of these. 'Tis a serious responsibility and oftimes a gloomy undertaking. Our life is spent on the darker side of human existence and misery, in the deepening shadows of which, as some writer has aptly said, "the God-like creations of the poet seem hideous masks;" still our duty is always the same, studying nature, vigilantly watching, cheerfully aiding. All through our professional lives, stern realities daily dawn upon us, much of the sentiment, romance and tenderness of our real

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selves has been sacrificed in our search for truth.

Each day tells us more; the strides are rapid, newer fields are opened up, and we are told of myriads of bacteria swarming in the air, apparently the purest, and lurking at so many places we least expect; that our cool, clear mountain spring is a favorite resort, and even that the Sacrament and Holy Wine is not exempt. We further know many of our worst diseases are directly traceable to these organisms, each having his preferred mode of attack and selected soil. Probably one of the best known now is the bacillus of Eberth, which by drinking water, milk or what not, insidiously steals along the alimentary track and finding a suitable camping ground at Peyer's patches, flourishes and multiplies to such an extent that he moves his habitat to neighboring tissues, and continuing to trespass, the integrity of the tissues is so upset that we have a patient, usually his age will be between fifteen and forty years, (this of some diagnostic value) with headache, insomnia, furred tongue, flagging energies, disturbed circulation, anorexia, epistaxis. He thinks he is "bilious;" we too often concur, order mercury and podophylin; patient departs, partakes of hog-sausage, coarse beef, hard boiled eggs, heavy bread, chicken salad, fruit cake and such poisons, when we are summoned again. Our diagnosis should have been made before, but diagnosis of typhoid fever is not always easy; even in uncomplicated cases a careful and exhaustive physical examination of patient and investigation of surroundings is always necessary. All are familiar with the array of its symptoms so nicely arranged in text-books, and few of us prepared for the serum tests, hence it is an individual study of each case and the intelligence of the practitioner that decides.

For instance, the characteristic temperature record of the so-called step ladder temperature, is in many cases a curiosity. The pulse is not necessarily characteristic and certainly not pathognomic.

Enlargement of the *spleen is of strong diagnostic value*, combined with others. It is usually palpable by the eighth day, and if there is not too much tympanites, this disappears as fever lessens. Septicæmia, malaria and miliary tuberculosis should here be excluded.

Rose spots are important signs, and when present are typical, but I have never seen them in more than thirty per cent. of the cases; their appearance is usually on the ninth day. Gurgling in right iliac fossa must be looked for, but many intestinal troubles have these and all the diarrhœas, so if accompanied by tenderness, and we can exclude appendicitis and pelvic abscesses, then we may expect typhoid.

The initial chill amounts to very little so far as a diagnosis is concerned, and often as many as six chills may, at varying intervals, occur in unquestionable cases of typhoid. This is misleading and in my section of South Carolina, where malaria abounds, often is the cause of confusion. Thus:

First. In typhoid we have the initial chill.

Second. Chill at onset of relapse.

Third. Result of antipyretics.

Fourth. At ushering in of complications as pneumonia, pleurisy, acute otitis, suppuration in mesenteric veins, pyæmia, abscess of kidneys, perforation, etc.

Fifth. During convalescence in bad cases.

Sixth. When concurrent malaria exists—this is rare.

To recapitulate, I look for the following, and combined, consider them accurate, malaise, headache, chilliness, pain in back and limbs, tongue pale and indurated (in beginning), margins indentated, *it is put out slowly and retracted indifferently*; there is confusion of ideas and mental torpor. Tinnitus aurum, epistaxis, ascending pyrexia, photophobia anorexia, rose spots, gurgling and tenderness in right iliac fossa, constipation or diarrhœa, and lastly vertigo. This I regard of great value. Patient on attempting to stand erect, trembles, and the nervous symptoms are pronounced. There a diagnosis is to be made from cerebro-spinal meningitis, for many cases of typhoid begin as typical meningitis. Fortunately the latter trouble is rare, and other symptoms with surroundings, usually settle all doubts.

So much for the diagnosis; now how shall it be treated?

Within the last few years over eleven hundred remedies have been tried or suggested for typhoid fever. All sorts and kinds of food have been advocated; hydrotherapy and antipyretics for the temperature; intestinal antisepsis, etc. While special symptoms arising in the natural course of the disease have been experimentally dealt with by almost every resource of the pharmacopœa, but there are few measures or means at the command of the physician which fulfill our wishes invariably, or even none which in all cases so far promises a specific; therefore he who adopts any one fad to the exclusion of all other efforts, be it in the line of hydrotherapy, antisepsis, or what not, fails in his duty to his patient, his profession, or himself. It has been said: "The best treatment is a good physician." One knowing the natural course of

the disease and able, therefore, to intelligently anticipate its various complications and phases, knowing these, how can he have any radical fixed schedule which can be best for all cases and their inconstances? He should be watchful and conservative, backed by the judgment to adopt such measures as his good sense will in individual cases dictate. It may be Woodbridge or Brand, in whole or in part, or probably a happier medium by the combined antiseptic and hydrotherapy methods; judgment must be exercised in mode or manner of each. Unquestionably hydrotherapy, variously modified, is for its indications the best treatment known, always to be used in hospitals and in private practice when possible. The treatment summarized embraces:

I. General management and nursing.
II. Diet.
III. Treatment of the temperature.
IV. Antiseptic medication.
V. Treatment of special symptoms.
VI. And the convalescence.

General Management.—A typhoid patient should be in a cool, well ventilated apartment, confined to the bed from the onset and remaining until convalescence is well established. The woven wire bed with soft hair mattress is best. A rubber cloth should be under the sheet; a good nurse in charge, and the physician should, at each visit, write out specific instructions.

Diet.—Foods easiest digested and obviously those leaving behind the smallest amount of residue. Milk heads the list and ordinarily about three pints for an adult in 24 hours. It is often advisable to dilute this with water, lime water or even æriated waters. It should be given at regular intervals and care exercised, for too much leaves masses of curds and thus proves irritating. The usual broths, chicken or mutton, come next, and many of the beef juices are good.

Water should be given in abundance and pleasantly cool. My experience justifies making this of paramount importance, and I wish I could go into the merits.

Treatment of the Temperature.—Bathing or sponging and not the use of coal tar antipyretics. Sponging with cool water is the preferred practice with the most successful physicians of my section. Dr. J. P. Simpson, of Laurens, who deservedly enjoys a great reputation, and has had extensive experience with typhoid fever, has, to my certain knowledge, had amazing success, especially in the last two years. Dr. Simpson's method of administering the bath is to place a wire cot by the bed, upon this lay a piece of oil cloth and cut opening in the centre for water to escape into vessel below, weight of patient causing the cloth to dip, thus throwing water to centre; patient stripped, is sponged with water, temperature 70. In some instances it is poured over, always using it in temperatures of 102½ or 103, and repeating as necessary to control this temperature; friction is used while administering and to point of bringing glow; when returned to bed, cold pack to head.

Antiseptic Medication.—The efforts to settle upon an agent destructive to the typhoid bacilli, or the toxic agent they produce, so far is a failure, and we adopt Yeo's plan of the chlorine waters; it has not been satisfactory, but certainly does no harm, therefore, is a pious fraud. The intentions are good. For my own part, salol is the remedy when there is no cardiac compli cations.

Treatment of Special Symptoms.—For tympanites and abdominal pain, turpentine stupes; diarrhœa if severe, starch and laudanum enemas, or subgallate of bismuth; no opium, even in form of Dover's powders. Constipation, if demanding notice, is best met by Hunyadi water.

As to hæmorrhage and peritonitis, the two grave complications, all are familiar with, and I suppose treat alike.

For the nervousness, hydrotherapy again comes and cold water to head; after the sponging and application of cold water cap, the result is usually so satisfactory as to admit of no strictly medicinal sedatives.

Brandy and strychnia head the list for progressive heart failure; digitalis is not good.

Convalescence requires even as much care and watching as the acute and active stage of the disease. Over-eating and too much exercise are usually the causes of relapse. The other minor details fall in line too naturally to tax your patience here, so I relieve you.

A Plea for the Earlier Diagnosis of Pulmonary Consumption.†

By Louis F. High. M. D.. Danville, Va.

The prevailing impression in a large part of the professional mind is that consumption is almost always incurable, therefore its existence need not be early sought for since it being first and last hopeless the evil truth will be known in plenty of time to bring a long season of sorrow at best, so the earlier the grave nature of the malady is

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known the longer will be the period in which doctor and patient will be forced to contemplate the fatal result.

To those who believe in its absolute fatality the time from incipiency to the stage in which the disease is unmistakable seems as so much comfort given the patient at life's last mile post. If the premises were correct the conduct here delineated might be most commendable, but such it is not and the physician who believes that all cases of Pulmonary consumption must die of that disease does not keep up with what is being done in this line of practice or lacks confidence in the power and resources of progressive medicine.

It is not an uncommon occurrence for patients to get well of consumption, though there are physicians in great number who believe otherwise and question the diagnosis of veracity of one who makes a contrary statement.

It has been stated upon scientific authority that about fifty per cent. of mankind is at some time of life effected by the consumptive germs. The death rate of the whole world has been estimated at fourteen per cent. of those who die. Evidently some must recover from the effects of the bacillus and as a matter of fact they do become germ free. The frequency of the cases in which this very often unknown and unconscious change takes place presents evidence of the existing disorder to such limited extend that the cause is never suspected.

As other diathesis may present variations of development from the mildest to the most decided, so may be the natural or artificial immunity to tubercular formation, varying from that which exists in the person who has it and is spontaneously cured to that class in whom it is rapidly fatal.

Between the extremes there are cases that grade from the lightest form to a condition of sufficient severity to put the patient in a state in which he seeks medical advice and under treatment for some ill-defined and seemingly insignificant trouble he is cured without the real nature of his ailment ever being suspected. A single prescription or a hygienic change may prove itself sufficient to restore the slight strength needed to perfect the lessened immunity. No ones imagination is appealed to in the attempt to establish the truth of the foregoing statement for it has been abundantly proven by post mortem investigation.

The encapsulation, calcification and fibroid changes observed after death in cases where nature unaided has successfully opposed the encroachment of germic onset shows its inherent tendency to overcome the morbific presence. Therefore it follows that when the bacillus does gain a hold sufficient to produce systemic disorder it has done so against the effort which has not only already been made, but which is still going on. In many cases the natural resistance has needed slight reinforcement which if it had been given in proper time would have proven an impassable barrier to further germ development.

Every physician who takes the trouble and pains to become thoroughly familiar with the means and methods of making exhaustive examination of the lungs, and will take the trouble to fully investigate the condition of the lungs of those patients who present themselves for treatment of some vague and ill-defined ailment whose chief symptom is usually of the digestive organs will frequently find pulmonary involvement of sufficient intensity to account for the indisposition of the patient. At the same time he will find that class of cases of consumption that is nearly as often amenable to treatment as diseases of other kinds.

An analysis of the records of twenty-five cases in which the point of early diagnosis was noted it is shown by the statements of the patients that though they had received treatment from other physicians for the ailment for which they applied to me their lungs had never been examined nor had their temperature been observed.

So this evidence—and a great deal more which unfortunately was not recorded—seems to show that the great mass of the profession has not yet come to the place where they can appreciate the fact that a mild tubercular infection may be the cause of a correspondingly slight disorder. Many believe that the tubercular process becomes engrafted on to a subnormal vitality and is therefore a result rather than a cause of the primary decline.

It is certainly a difficult matter to say which is cause and which effect in some cases but in the majority of instances it has appeared as a concomitant of an unhigienic mode of life. This view may be the result of an investigation in which a large number of patients belong to a class who live with little regard for sanitary laws. Nevertheless failure to recognize the beginning of the disease allows the germ colonies to increase in number and power unless the natural resistance of the patient is alone able to hinder their propagation and growth.

At the outset in most cases there is a time when the loss of resistance is so slight that the balance might be easily restored if only the real condition was appreciated. At this point—so directly bearing on the ultimate issues of life—those means that improve the

quality of the constituents of the blood and tend to promote constructive changes, which as a rule are not difficult to inaugurate, will often decide between recovery and disease.

To let the golden first moments of pulmonary tuberculosis pass without realizing its existence is to deepen the idea of the incurableness of consumption and takes nothing from some of the needless reproach that has been brought on medicine.

The serious relation that a person suffering with pulmonary tuberculosis sustains to the general public is one of the important reasons why the existence of that disease should be known at the earliest possible moment. Any action looking to the protection of society, whether it be State or municipal, must have the hope of its success based upon the finding out of those who come within the pale of the sanitary regulations as soon as such person becomes infected.

Nothing could impair or render useless the final operation of laws directly dealing with means looking to the prevention of bacilliary dissemination more than the present lack of interest shown by some physicians in making an early diagnosis.

The Practical Treatment of Carbolic Acid Poisoning.†

By Dr. Stephen Harnsberger, Catlett, Va.

Oliver (London Lancet, Nov. 19th, and The Philadelphia Medical Journal, under head of Latest Literature, Dec. 10th, 1898) reports the case of a woman having swallowed seven drachms of commercial carbolic acid. Treatment: Lavage of the stomach; removal of eight ounces of blood and the intravenous injection of four pints of normal salt solution. Recovery.

In the preceding abstract we see realized the essential end of all our effort. No resource could have accomplished more. But in view of the increasing mortality from carbolic acid poisoning in recent years, is it not a fact that the question of diminishing this death rate by a more simple, more quickly obtainable and more easily administered treatment should concern scientists more earnestly? Text books on the subject, at least those to which I have access, either suggest nothing of decided value, or else designate remedies not at hand, or too slow in their preparation or action to meet the urgency of emergency cases. Carbolic acid is used in one capacity or another by almost every family in the land—cheapness being its chief basis of favor. Therefore, the fact cannot be concealed that its antidote, if possible, should be simple and at hand whenever needed. Animated by a personal knowledge of the successful termination of several cases of carbolic acid poisoning, I beg to present the history of the one that will indicate most clearly the practical good of a very handy and simple, and, from the results accomplished, apparently rational mode of treatment.

During the month of October, 1896, the residents of my village were very much worked up over the appearance in one of the families of a malignant type of diphtheria. Every householder rushed to the local dealers for some prophylactic, and as carbolic acid was cheap and abundant, its sale far outran all other reputed germ-destroying agents. In their great haste to outdo the little Klebs-Lœffler bacillus safety was lost sight of; many did not label their bottles at all, and some even had bottles filled on which remained intact the labels of former innocent preparations. This happened at the home of the boy whose case I will now briefly describe—where the Syrup of Figs bottle was filled with carbolic acid.

On December 18, 1896, all the members of the family were at church when the boy, Robert B., aged stxteen years, who had been accustomed to the use of Syrup of Figs, took down the bottle from its usual place in the press, poured out a large kitchen spoonful, (approximating an ounce and a half) and swallowed it quickly. The intense burning made him realize his mistake. He at once drank water freely but with no relief. Without further delay he started off for my office, half a mile distant, at a double quick pace. By the time he reached the railroad track, perhaps one half the distance, his legs became so weak that he could not raise his feet over the rails. Three young men who were on their way from church found him in this condition and carried him to my home, which he reached at 9:30 p. m., or about thirty minutes, perhaps, after the ingestion of the poison. My son 12 years of age, who was in the office at the time, at once detected the odor of carbolic acid. The patient was in a limp and comatose state; respiration was suspended and pulse imperceptible; the surface of his body was cold and of noticeable bluish tinge. There was also, at times, marked objective tremblings, but no convulsive phenomena. It need scarcely be mentioned that death seemed inevitable. Moved by my knowledge of previous cases of carbolic acid poisoning, I did not risk the delay of lavage but at once

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introduced into his stomach a pint of cream. At the same time I kneaded the organ in order to produce as perfectly as possible, or rather in imitation, physiological motility and the more intimate mixing of the contents, as well as have the cream form a protective film over the entire mucous surface and in this way help to limit the absorption of the carbolic acid into the circulation and to stop its further destructive action locally. I used no strychnine or other stimulant commonly administered to brace up the weakened respiratory and cardiac forces—only dry heat to his feet and friction to his ankles and arms. The cream was administered every few minutes and the kneading kept up.

About or shortly after midnight his respiration became much less embarrassed and improved co-existently with the strength of the pulse and return of the normal color of the skin. The motor disturbance of the lower limbs did not give place to functional energy for some time after cerebration was restored. At first, with returning consciousness, he would reply to questions in monosyllables, repeating some one word perhaps a dozen times and always using a word taken from the question asked. This condition gradually improved, but it was at least an hour before he was able to answer questions intelligently. I kept up the administration of cream or unskimmed milk, only not so frequently, for at least two and a half hours after he became rational. In the mean time I had him removed to his home. In addition I ordered a full dose of magnesium sulphate in water, and to be followed by all the water he would drink. Also one drachm of the fluid extract of hydrangea. Both bowels and kidneys responded promptly. A mouth wash, composed of Euthymol 1 part, water 4 parts, and two teaspoonful-doses internally, at proper intervals, allayed the tenderness and caused the inflamed mucous surfaces to heal almost at once. He was out the 2nd day — only a little nervous, and with somewhat impaired appetite. Of course so few cases can only suggest further medical enquiry.

In closing, allow me to make a slight digression. Actuated by my experience in such cases. I was led to try a few experiments on the human subject with carbolic acid extinguished with glycerine and cream, or with alcohol, glycerine and cream. From the results obtained I am of the opinion that as much as 4 drachms of carbolic acid can be administered in this manner, to an adult, without risk of symptoms of its toxic effects —and in certain cases even larger doses. Under two drachm doses neither objective nor subjective symptoms were observed. Three drachm doses caused only a slightly warm sensation in the mouth and throat but no gastric uneasiness. No effect was noted upon the pupils, pulse, respiration, temperature or kidneys. If further trial establishes the non-toxic effects, local or systemic, of large doses of carbolic acid thus modified, it seems proper to predict much benefit from its internal administration, especially in fermentative gastro-intestinal disorders.

As the Society adjourned the night of the 19th, instead of at noon on the 20th as was understood would be the case by most of the members, there was no discussion of the above subject. For this reason and the good it may do, it would not be out of place, perhaps, to report, in connection with the foregoing paper, the following case, by Dr. John Sweaney, of Leaksville, N. C.

Case, child, age 24 months. Supposed to have swallowed 2 drachms of carbolic acid. Gave one teaspoonful of magnesium sulphate in solution, followed by glycerine. Also egg and sweet milk. For the shock, nitro-glycerine and strychnin. Child made an uninterrupted and perfect recovery. If given at once the sulphate of magnesia unites with the carbolic acid and forms the sulpho-carbolate of magnesia. This is the only known chemical antidote, and probably not very well known to the profession.

Uricacidæmia as the Cause of Hay Fever and Asthma.†

By Dr. John Dunn, Richmond, Va.

Repeated failures through several years to cure hay fever by treatment applied directly to the nose membranes, even when these were the seat of hypertrophies, polypi, etc., led me finally to tell patients suffering with this trouble that while their discomfort could be lessened by removal of the diseased conditions in the nose, this local treatment would have no effect in preventing a recurrence of the hay fever. The pollen hypothesis had seemingly so many points in its favor that I was unwilling to admit that "hay fever" could be purely symptomatic of a more or less definite condition of the blood.

Bishop's book and papers first turned my attention to the connection between hay fever and uric acid. Haig's work on Uric Acid made a clearer understanding of this connection possible.

The following case was the first to lead

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me to examine more carefully than ever before into the possible causative relationship between uricacidæmia and both hay fever and hay asthma.

Mr. A., aged 46, consulted me, in the winter of 1897,in regard to his nose. "Doctor, I want you to burn my nose. It is the only way in which I can get relief." This was the patient's introduction of himself to me. I asked him what was the matter with his nose. He told me it was "tight as a drum and pained him," "that he could get no air through it," "could not get his breath." He was constantly blowing his nose and was evidently suffering considerable discomfort. "Why do you want it burnt?" I asked. "Because I get more relief in that way than in any other. In the past few years I have suffered almost constantly with my nose, which I have had burnt twenty or twenty-five times,and I have had something sawed out of it, but it has grown up again. I have a catarrh powder, which relieves me for a few minutes at a time." Examination of the nose revealed the turbinated membranes as swollen and tense as numerous old scars caused by the electro-cautery would permit them to be. There existed, however, some free air space in the nose, through which he could "not get a breath of air." This fact, that there existed free air space in a nose which gave the sensation of being entirely closed, is one I have frequently noticed, especially during asthmatic attacks. I declined to burn these membranes. I then inquired into the diet of Mr. A., who weighed 250 pounds, and found that it consisted almost exclusively of meat and quantities of beer. Regulation of the diet, with administration of alkalies, afforded entire relief from the distressing nasal symptoms without any treatment of any kind being applied to the nasal membranes,which on the old hypothesis that the source of the disease lay in these swollen turbinates would have required extensive reduction, either through the aid of acids or the cautery. Three weeks ago Mr. A., reported that his nose still remained comfortable. The results obtained in this case of perennial hay fever were duplicated in the case of Mrs.F., aged 35, who for years had suffered from hay fever whose manifestations as a rule were severest in the late spring months. Attention to her diet relieved the hay fever within a few days and far more completely than any intranasal treatment to which she had subjected herself. A letter from her husband received October last, states that the relief obtained has been permanent. It must be understood that both Mrs. F. and Mr. A. have continued to follow the advice given them in regard to diet, etc.

When the regular hay fever season came in August, the influence of diet in the causation of hay fever and hay asthma was clearly demonstrated in several cases, some of which I shall here mention briefly.

The first case was that of Miss L., aged 16, who for several years had suffered severely from autumnal hay fever, which this year had been accompanied by asthmatic attacks of such severity that the greater part of the night before she was brought to my office she had spent gasping for breath. Examinatian of her nose revealed a typical hay fever condition, of the membranes, which were swollen, *pale*, and the seat of profuse, clear secretion. In places the turbinates touched the septum. Posteriorily, the middle turbinate on the left side at its end formed a huge, whitish, œdematous swelling, polypoid in appearance, which was jammed so tightly against the septum that a snare wire could not be forced between them. There was a general œdematous and puffed condition of all the portions of the turbinates visible by posterior rhinoscopy. The young lady's eyes were red and watery. In short, there were present all the conditions, which those who believe in the mechanical origin of hay fever would rejoice to find, hoping by their removal to cure the disease. I next asked Miss L. what she had eaten for breakfast that morning. "Ham and bread," was her reply. "And for supper last evening?" "Ham and breat." "Were you helped to ham more than once?" "I suppose I was, as I am very fond of it." "What did you eat for dinner?" "Ham and bread again. I cannot touch any vegetables but corn and sweet potatoes, and I do not care for any meats except ham and veal." She drank tea and coffee sparingly. Such a diet as the above for a girl of sixteen,who spent the greater part of her summer days idling about the house and reading, could but produce systemic derangement, and here it had caused hay fever and asthma, as the sequal proved. A small portion of the swollen, posterior end of the middle trubinate was removed with the cold snare. No other nasal treatment was given. The patient was forbidden to taste meat of any kind and to omit the use of tea and coffee. Twenty drops of the saturated solution of the Iodide of potash, after meals, three times a day were prescribed. At the end of a few days the nasal condition was markedly improved and a week later the nasal membranes had returned to their normal condition. The puffiness and œdema had disappeared, as had the asthma and nasal discomfort. Even the huge swelling of

the posterior end of the middle turbinate was no longer present.

The next case is one of hay fever with asthma. Mr. F., aged 28, a tobacconist, in his attention to business not infrequently would remain in his shipping office at work the whole night through. His custom was to eat his meals hurriedly and hasten immediately to his work. This mode of living had produced an anæmia, which from year to year was accompanied by hay fever and asthma. Mr. F. has been under my care from time to time for several years, during which I have had occasion to remove a few small polypi from the region of the middle turbinates. My treatment, except that applied to the nose, had been general and with no recognition of a possible dietetic origin of the trouble. About the middle of Aug., 1898, he called at my office one morning suffering greatly from asthma and a profuse, watery discharge from the nose. He gave the following history: "Last Sunday I ate heartily and afterwards took a long bicycle ride. On my return I felt badly. My mother brought me a glass of some very sour wine and told me to drink it, saying it might make me feel better. I did so and early next morning my trouble began, and I have been growing worse ever since." Examination of the nasal cavities revealed no abnormalities save the characteristic œdema and watery, anæmic appearance of the puffed membranes. There were no polypi present. The septum was straight. Acting on the supposition that uricacidæmia was the cause of the trouble, Mr. F. was treated accordingly and in a few days entire relief was obtained. No local treatment for the nasal mucous membranes was given. It is of interest to note here that Mr. F.'s father accompanied his son to my office. He was lame and walking with a stick, and on looking at his feet, I saw that from the right shoe the greater part of the upper had been cut away. "Gout?" I asked. "Yes, this attack has lasted now for some time. When I was a young man I suffered from asthma just as my son does now. Since the gout first attacked my toe, now a good many years ago, I have never had an attack of asthma. I have notes on another case in which the appearance of gout was followed by complete cessation of an asthma of many years standing.

With the above cases before us it will be well for us to consider the most widely spread beliefs in regard to the cause of hay fever. The pollen hypothesis has had and still has many advocates, and yet frequently patients ask, "if my disease be caused by pollen why is it that ——?" the remainder of the question varying and being seemingly unanswerable on this hypothesis. For example, Mrs. C., aged 50, a large full blooded, active woman, has suffered from autumnal hay fever for many years. In 1897, when the season came round for her to have an exacerbation, i. e., the latter part of August, to her delight her nose remained comfortable, yet hardly had she congratulated herself when she was taken with "something resembling a congestive chill and was desperately ill for a few days." In talking to Mrs. C. about her case she told me of a friend of hers, and a great sufferer from hay fever, who had "had at the time the hay fever should have come on" a similar congestive attack, and that year she "had escaped hay fever."

Considering hay fever as a manifestation of uricacidæmia, these "congestive attacks" are susceptible of explanation; considering hay fever as a result of the action of pollen in diseased nasal membranes, we are at a loss to know why the latter case should have escaped hay fever during the season for it, when others in the same region were affected as usual.

Local Morbid Conditions of the Nasal Mucous Membrane.—This to the rhinologist who would confine the origin of all intra-nasal troubles to the nasal cavities and their concontents is the one which appeals most strongly. It is certainly true that in all cases at the time of the exacerbation of hay fever or asthma we find either abnormal or pathological conditions present in the nasal membrane; but that these conditions are the cause of the hay fever has never been proven. Again, conditions similar to those found in the noses of hay fever sufferers, so far as the eye may judge, exists in the noses of people who have no hay fever. Or take the visible condition of the nasal membranes during the attacks of hay fever and during the long months when the hay fever is absent; no advocate of the pollen hypothesis claims that the nasal mucous membrane returns to normal after the pollen season is over. Some claim that curing the diseased, and I suppose that they mean the visibly diseased, intra-nasal tissues cures the hay fever.

Let us examine the visible conditions of the nasal membranes in a few cases of hay fever. Mrs. C., aged 50, above mentioned, has had hay fever in August and September for many years, and it always makes its appearance with an intense itching in a small mole situated on the face about three-quarters of an inch from the left ala of the nose. Later her eyes begin to water, burn and itch, and then the nasal trouble begins. I have had occasion to examine Mrs. C.'s nose, both during and between attacks; at the

latter times I could find no condition existing for which I could in another person, not suffering from hay fever, advise treatment of any kind. The septum is not perfectly straight and regular, but nowhere touches the turbinated tissues, which save for a moderate amount of puffiness (no hypertrophies) are to all appearances normal. During the attacks which are of great severity the swelling is never sufficient to entirely block the air passages. 2d. The case of Mr. A., aged 35, in whose nose the only visible abnormalities were some tendency to puffiness of the turbinates. 3d. Miss L., aged 16, seen at the height of attack, turbinates much swollen, the posterior end of the left middle turbinate so much so that forced as it was against the septum might if unrelieved have been the starting point for one or more polypi. The membranes returned to normal without direct treatment save removal of a small piece of swollen turbinate. 4th. Mr. F., aged 28, had several small polypi springing from the superior turbinate, and some general hypertrophy of the turbinates posteriorly. Removal of the polypi and treatment of the hypertrophies did not prevent the recurrence of the hay fever and asthma.

That nasal polypi alone are not necessarily the cause of hay fever is shown by the fact that many cases are seen where nasal polypi, even in large numbers, exist without it. That the reverse is true, I think there can be no doubt, viz.: that whatever causes the hay fever acts so profoundly on the nasal mucous membrane that changes are brought about which result from time to time in the formation of polypi. This can scarcely be denied by any one who has examined many cases of hay fever, for all stages of the development of nasal polypus can be observed.

The cases above mentioned, especially those of Mr. A. and Miss L., seem to show clearly that excessive meat eating may produce nasal troubles which in no demonstrable particular differ from the ordinary perennial and autumnal hay fever; that the visibly abnormal conditions and the discomfort accompanying them disappeared after regulation of the diet shows that what is put into the stomach has far more to do with the causation of some forms of hay fever and hay asthma than has any local morbid intra-nasal condition; that during the past hay fever season every case I have seen, which would follow out my directions in regard to diet, etc., has been either relieved or much benefitted, and this while continuing to live without change of surroundings, making no effort to escape from "the pollen laden" atmosphere, seems to show that hay fever and hay asthma are often food, not pollen, products.

In regard to the treatment of autumnal hay fever and hay asthma, little need here be said. Where the nasal tissues are the seat of the polypi, the latter should be removed. *True* hypertrophies, and obstructing septal deviations and ridges, or spurs and synechiæ demand surgical interference. The patient, however, should be told that this work is done, not to cure the hay fever, but because it will render the nose more comfortable and would be required in any case. Physiologically swollen turbinated tissue no more requires the assistance of surgery or the cautery in any of its forms, than does the patch of acute eczema, or the œdematous ankle of Bright's disease. The application of the cautery to the turbinated membranes, swollen in an exacerbation of hay fever, and as the result of uric acid irritation, may give the patient some temporary comfort, but does not cure the hay fever, and does actual harm. During the exacerbation a camphor-menthol-albolene spray will give considerable relief. One's success in the prevention of the attacks of autumnal hay fever, and in lessening their duration and severity when present will depend, however, first of all upon one's recognition of the facts that it is the result of improper eating and living, that it is neither necessarily the result of visible morbid intra-nasal conditions, although these may exist, nor of the action of pollen, although dust and pollen may have their influence in increasing the severity of the intra-nasal irritation, and lastly, that hay fever although it may develop, does not depend upon a "neurotic condition" or an "idiosyncrasy."

Considering hay fever as the result of uricacidæmia the treatment should be accordingly. It is of the first importance that our patient should give up altogether eating meat for some time before and during the hay fever season. Such articles of food as raise the acidity of the blood, and thus prevent the excretion of the uric acid present in the blood, should also be forbidden.

Haig has shown that meat, inasmuch as it contains uric acid, is the article of food which, if used in excess, and especially if taken with substances such as wines, beer, tea, coffee, etc., which raise the acidity of the blood, will sooner or later produce uric-acidæmia. Repeated attacks of uricacidæmia bring about irritations and inflammatory conditions in various parts of the body, and also in time produce changes whereby the power of excreting not only the uric acid introduced into the blood with the food, but that produced in normal tissue

metabolism, is weakened. This latter should be borne in mind, as it helps to explain why the attacks of hay fever are, as a rule, more easily controlled by regulating the diet, and by the administration of alkalies and tonics in the case of the young than of older people. I am convinced, however, that the deleterious effect of a meat diet in the causation of uricacidæmia is not solely due to the uric acid it contains, for this is relatively small in amount. Meat contains elements that stimulate tissue metabolism. This metabolism results in the production, among other things, of uric acid. If now, this uric acid be for any reason not excreted, but retained in the blood, uricacidæmia results. For calling my attention to this point I am indebted to Dr. J, S. Wellford, of Richmond Va.

Coffee, tea, cocoa, acid wines and beer are, besides meat, the chief articles of food forbidden by Haig. Coffee, tea and cocoa have for their active principles substances identical with uric acid, and thus used as food, not only raise the acidity of the food, but add uric acid to the amount already present in the blood. Acid wines and beer, which is also acid, not only raise the acidity of the blood, but result in increased tissue metabolism, which as above stated means increase in uric acid. Eggs increase tissue metabolism. I do not mean to convey the idea that these substances should be forbidden to all the world as articles of food; but I do wish to say that in the treatment of uricacidæmia we should bear these facts in mind and make use of them accordingly; for we shall meet with patients where the strictest avoidance of all the above mentioned articles will conduce greatly to their well being.

If our patient is seen a few weeks before the hay fever season begins and will follow our suggestions in regard to diet, exercise, bathing, etc., then, in young people a mild tonic is all the additional treatment necessary; if the young patient come under our care first during the hay fever season, an alkali in the beginning in considerable doses will be required. In older people the success of such treatment while striking is not always successful. Why? Probably because after repeated attacks of uricacidæmia when the general tissue changes are great and when the power of excreting uric acid formed in the normal tissue metabolism is lessened there result changes whereby enough uric acid is retained in the blood to bring about uricacidæmia. It is important to bear this in mind, or we may attribute our failures to the wrong cause. As a rule, the older the patient, the more he has lived up to the notch of a meat and acid diet, the more difficult do we find the hay fever exacerbations to control.

In cases of perennial hay fever and asthma our problem is vastly more complicated, for we are dealing with the conditions of the blood, in which precipitation of uric acid takes place with great ease, and in many of these cases tissue metabolism is so imperfectly accomplished that the result is conditions which perpetuate a chronic uricacidæmia. The question is then no longer of a meat or vegetable diet, with the administration of tonics or alkalies. We have to regulate the organs which excrete uric acid and thus prevent its undue accumulation in the blood. We have to restore the normal tone to general tissue metabolism which regulates the condition of the blood, and at the same time the relative ease, or difficulty, with which uric acid is precipitated into the tissues. Anxiety, fright, over-exertion, want of proper bodily exercise, interference with the functions of the excretory system, whether through causes organic or functional, food, the relative constituents of which are unsuitable to the mode of life, and many other things to begin to mention which would take us too far afield, all have their influence in bringing about uric acid precipitation.

Thus we see the problem of affording relief may be vastly complicated. It is not, however, always so, and if we bear in mind that hay fever and asthma are but manifestations of uricacidæmia and treat our patient accordingly, while we may have failures, we shall also have successes.

DISCUSSION.

Dr. J. N. Upshur.—I don't know anyone who could read upon such a subject as this who should command more profound respect and attention from me, than my friend, Dr. Dunn. I know how careful he is in his reasonings, how careful he is in stating a conclusion unless he has just cause for that conclusion, and it is not with the intention of criticising him, but simply because there are some few things in connection with hay fever that are not, even with his clear reasoning, perfectly clear to me, no doubt due to my inability to grasp the subject as I should. One of these facts is a very new and interesting fact, that hay fever may be due to excess of uric acid in the blood. It is very easy to understand how it can be due to uric acid when we remember that one of the manifestations or conditions of that trouble, is seen in itching which we have about the nose, evidently when there is too much uric acid in the blood. But the point which interests me particularly in connection with this and which I do not understand, is that patients

who are subjects of hay asthma, if hay asthma is due to an attempt of elimination of uric acid through the mucous membrane, why these patients shall have the same conditions existing in the same system, and yet have hay asthma only at certain seasons of the year. Now, I have a lady who has been a subject of hay asthma for a great number of years. who no doubt is more or less lithemic, who has had manifestations of lithemia or gout at other seasons of the year. But where there is nothing special in the food to develop this hay asthma, yet regularly at the given day will develop the symptoms of hay asthma. I have known this lady under conditions where the diet has been exceedingly abstemious, where she has been traveling or at sea for hours and taken no food at all. A week subsequent, on the 22d day of August, without any premonition, entering the sleeping car to leave the city, sneezed and her fever came on and lasted for six weeks. Now, I think if it can be explained on this line, and if the treatment which is to effect a cure can be effected from a dietic standpoint, we are very much indebted to these gentlemen who have carefully and honestly and with marked ability pointed out this new road toward health. If you gentlemen have seen thir sort of thing, you know there are few things that have caused greater suffering. That is the difficult point for me to understand with regard to hay asthma, and I would like very much for the doctor to exclaim why they don't have these phenomena at other seasons of the year but are developed simply at the hay asthma season from the presence of uric acid, when it seems to me that if this be the cause they should have this trouble in any other month of the year—January, February, or any other month.

Dr. Dunn.—The patient to whom you refer, Doctor, has she never hay asthma except in August?

Dr. Upshur.—This lady is a patient of the Doctor's, let me say, and has as much confidence in him and admiration for him as I have. She has had slight manifestations of hay asthma in June, but not with the same regularity she has had in August always. Since sitting here, one thing has suggested itself to me probably as a cause of this manifestation in June, and that is that she is exceedingly fond of strawberries, and probably my theory of strawberries may there have come out, but at other times of the year, the same conditions existing, this lady, who is also a patient of mine, has no manifestations or indications or hay asthma, and yet for twenty-five years she has had this manifestation of hay asthma. She has had hay asthma and been at sea for a week and lost it entirely. Of course, the ditetic element would come in there, because she was taking no food while at sea, but the moment she landed the symptoms of hay fever have returned,and that is a thing I am interested in. It is for information and arriving at some happy issue in this matter that I want to arrive at some conclusion that I can grasp.

Dr. Dunn.—The point made by Dr. Upsher occurred to me in preparing these remarks; fearing, however, to make my paper too long, I omitted any attempt at an explanation. It will probably be found along the following lines. Hay fever occurs in persons who are subject to lithemia; in other words, in persons whose general condition is such that all of the uric acid which makes its way into the blood is with difficulty excreted and there exists thus a tendency for it to precipitate somewhere in the system. In these persons, during the early summer, when the day and night are both warm, the excretory system, aided greatly on its cutaneous side, is able to get rid of the uric acid as it is formed. The great sweat system of the skin is, however, working under high pressure. About the middle of August the nights begin to get cool, and thus the activity of the sweat glands is lessened, and as a result some of the uric acid is not excreted. It is precipitated in the nasal mucous membranes, and the result is hay fever. Witness how common head colds are at this season of the year; nor is it unlikely that the conditions which induce head-colds in non-lithemic persons have much influence in causing the nasal mucous membranes to be the seat of the uric acid precipitation in persons who suffer from lithemia.

Dr. Jos. A. White.—It is a little out of order to make remarks upon a paper when the author has practically closed the discussion, but I understand Dr. Dunn was simply answering a question. The theory Dr. Dunn has just enunciated, is of practically recent origin, and since the investigations as to the effect of lithemia and its various manifestations, is simply the new explanation of what is the causation of the development of hay fever, but I have no doubt in the world that experience has demonstrated that it has a very good foundation in fact, but by itself displays all the various phases and manifestations of these reflexes that we meet with in connection with nasal troubles. For instance, as I understand Dr. Dunn to state that he has practically drawn the conclusion that hay fever is to be ascribed to a neurosis, and I think in that respect his paper is what I would have expected from

him, but I don't think he has drawn exactly a correct conclusion.

Mr. Dunn.—I may have said that, but I am willing to admit that the conclusion may not be correct,

Dr. White.—I have had considerable experience in these cases and I am very familiar with the theories trying to explain these peculiar mysteries that we meet with all the time in the practice of medicine, of which we have no satisfactory explanation, and to-day they haven't any satisfactory explanation. We are always trying to form theories that we work out, and we always come sooner or later to stumbling blocks that won't accord with our theories, and we pass over these to look for something else. This is not only true as regards hay fever arising from the spores of plants, or some blood alteration like uric acid, but it applies to other things besides hay fever and asthma. Now, I am satisfied that it is the cause of a great many attacks in case of hay fever and ordinary asthma, that it is not periodic, which we do not call hay asthma, but I am satisfied also that the explanation of it is, from whatever cause, I don't care whether it is irritation that started out with symptoms, I don't care what causes this, it is after all the neurosis theory that is the best. It is always going to have a foundation. I don't care what else you add to it, it always comes back to one single thing, and that is the weakness of the nerve centers, the weakness of the reflex sub-centers that allows these peculiar manifestations as to the result of any irritation, and the result of hay fever is too well known a fact for anybody to dispute. I have got an attack of asthma, a violent attack of asthma, an attack that would scare me more than the patient because the patient has had them often, I think the patient is going to strangle in my office. All of us have had that experience. Why should touching some point of irritation in the nose cause a violent attack of spasm of the bronchial tubes? Yet I have seen it repeatedly. That isn't because there is uric acid in that man's blood. He has uric acid there all the time if he has it. There is no more reason why touching his nose should give him that attack than touching his toe because of uric acid. It is because the respiratory tract when irritable in this way is controlled by sensitive nerves immediately conducting that impression to a sub-center in this peculiar manifestation or characteristic. I don't doubt that uric acid may be the cause that has weakened these centers so they are easily affected by an irritation, because if they hadn't lost ordinary resistance there would be no reflex manifestation of neurosis. The same thing applies to periodical attacks. Why is it that we have every now and then an influenza that propagates itself all over the country in every direction? Why don't we have that sort of thing all the time whenever a man has a cold in his head? Because of peculiar atmospheric conditions. It doesn't attack everybody. It may attack me and my neighbor escapes. Because I am not immune from whatever it is that propagates the trouble. So it is that these people who have weak centers are affected certain seasons of the year by certain atmospheric influences.

Dr. Robinson.—I hate to get up so often, but this is a subject in which I am very much interested. I was for twenty-five years a subject of hay fever myself, and I have suffered a good deal at the hands of Dr. White, both of torture and of relief. The paper of Dr. Dunn impressed me very much. For twenty-five years I sought the sea coast and the sea air for relief, and it usually gave me immunity while I was there. The inference would be that there was atmospheric causes bringing that on from the 20th to the 30th of May that provoked these attacks. That doesn't necessarily imply that uric acid conditions underlying my nose in a local space have gotten my nose in a condition to make it more irritable by whatever atmospheric causes. Not only that, but a statement from Dr. Upshur bears out the fact that although when I did go to the seashore and come back, if I would eat fruit I would immediately have an attack, even before I got through. For twenty-five years I was subject to urinary troubles and uricacidæmia. For three years I have taken alkalies when I was dieting myself pretty fairly. In that time I have not had any recourse to sea air, and I haven't had any hay fever.

Dr. Dunn.—I wish merely to say that Dr. White and myself are in accord in regard to the neurosis element of hay fever. I do not believe that hay fever is either a neurosis or that a neurosis must exist before hay fever is a possibility; but I do believe that the excessive irritation of the nasal mucous membranes caused by the precipitation therein of uric acid may make such an impression upon the central nervous system as to induce a neurosis and all that is meant by the use of the term.

Statistics of life insurance companies show that in the last 25 years the average of woman's life has increased from about 42 to 56 yeers, or more than 8 per cent. In the same period man's life on the average has increased in length 5 per cent.

Simultaneous Blood-washing and Blood-letting in Uræmia.†

By A. B. Knowlton, M. D., Columbia, S. C.

Through an oversight on my part, the complete title of this article does not appear upon the programme; with your permission, therefore, I invite your attention to "Simultaneous Blood-washing and Blood-letting in Uræmia."

Blood-letting as a treatment of uræmia has been recommended and practiced for many years with varying degrees of success claimed for the procedure, while *blood-washing*, or the intravenous injection of the normal salt solution has, for this condition, had many advocates during the past eighteen months. It is, however, the *combined* or *simultaneous* practice of blood-washing *and* blood-letting to which I will *especially* allude.

No claim is made for the therapeutic effect of this combined procedure in uræmia of a *chronic* nature, but when we have the blood surcharged with toxic elements, and the nervous centers irritated by excrementitious material as in a severe attack of *acute* uræmia, it becomes evident that to remove a portion of the poison by bleeding, and to immediately re-establish the cardiac and vascular tone by an intra-venous injection of normal salt solution, is a most rational treatment.

The only published treatment along this *immediate* line which has come to my attention was a case of puerperal eclampsia reported in the Therapeutic Gazette for February, 1898, and in which case the bleeding was from the uterine sinuses in the form of a post-partum hemorrhage which was purposely permitted to continue until sufficient blood was thought to be lost, while the saline *injection* was given hypodermically—the *objects*, however, were the same, first, to lessen the sum-total of poison in the system by bleeding, and second, to dilute the remaining blood passing to the nervous centers, and to maintain vascular tone by supplying the system with water. The only other case which I have seen reported, in which the bleeding and intravenous were done *conjointly*, is that of Dr. Young in the Maryland Medical Journal for Nov. 19th, 1898, in which case the patient was suffering from septicæmia after an operation for purulent appendicitis, and in which he bled from one arm while he injected the solution into a vein of the other—both these cases made good recoveries.

†Read before the Tri-State Medical Society of the Carolinas and Virginia, at Charlotte, N. C., January, 1899.

I submit three cases of my own, the first two of which were reported in the Philadelphia Medical Journal for July 23, 1898, and I beg your permission here to present them. The first of these cases occurred on Nov. 16, 1897, which, so far as I am aware is the first published attempt at this combined procedure of blood-washing and blood-letting for this condition.

Case I.—On Nov. 16, 1897, I was called to Mrs. P. who had passed through a normal labor the day before, having given birth to a healthy full-term child, and who had been in convulsions for two hours. In addition to the usual treatment, normal salt solution (3 pints) were injected into the right median basilic vein, and at the same time about twenty-two ounces of blood were drawn from the left temporal artery. The patient rallied somewhat, but did not regain complete consciousness, dying in three hours after my arrival.

Case II.—On April 15th, 1898, I was called to Maggie P., colored, who was in the eighth month of pregnancy, and had had four convulsions of increasing intensity during the two preceding hours. There were no signs or symptoms of labor, and although the patient was unconscious, I decided to make a thorough test of this treatment, and, accordingly did *not* dilate or empty the uterus. I injected three pints of normal salt solution into the right arm (median basilic vein) and simultaneously bled about 20 ounces from the left. No other treatment was given. In half an hour after the injection and bleeding, the patient had one convulsion, which was said by the woman present to be much lighter than any of the others. In six hours more she had another convulsion, which was even still lighter and amounted to only a faint tremor. In the meantime the patient became conscious and called for nourishment. In eight hours more (14 hours since the bleeding and injection) I dilated the cervix under chloroform and delivered the child. The woman had no more convulsions, and made a good recovery. In view of the rapidly increasing intensity of the convulsions before the treatment, and their lessening intensity and subsidence after the treatment and before I emptied the uterus, I am convinced that the patient's life was saved by the procedure.

Case III.—August 10th, 1898, Mr. A. had been in uræmic coma for 17 hours when I arrived. I immediately bled about 25 ounces from the left arm and injected about 4 pints of salt solution into the right. I repeated the injection (about a quart) in an hour. Patient gradually responded to reflex tests, and in about three hours was con-

scious. Two more quarts of saline injection given on next day. Patient made a good recovery, though urine still shows some albumen and feet occasionally œdematous.

I believe that the day is not far distant when this means of depletion and dilution of the blood will be universally considered most rational treatment in all forms of *acute* toxæmia, such as uræmic coma, puerperal eclampsia, pernicious malaria (except where there exists too great a dyscrasia), and in all conditions of over-loading of the blood with excrementitious products.

The amount of blood which we could safely abstract from the human being is a somewhat unsettled question. According to Dr. Bovie we may take 1-19 of the entire body-weight from the dog, *provided* we immediately supply the vessels with normal salt solution. If this be true, and if Paine is correct in his estimate that one-tenth of a man's body-weight represents proximately the amount of his blood, and if also a man can stand about the same proportional depletion as the dog, it follows that from a man weighing 150 pounds 7½ pints of blood, or about one-half the entire amount of his poison-laden blood could be safely abstracted, provided we immediately or simultaneously supply his system with a sufficient quantity of a normal salt solution.

As to the quantity of solution which could safely be injected—I have never injected more than 5 pints at one time, while Dr. Young has injected nearer 3 quarts. The Liepzig School of Experimentation has demonstrated that the salt solution, amounting to as much as three-fourths the original quantity of blood, could be injected into the dog without any unfavorable symptoms whatever—if human beings can as safely stand a proportional quantity, about six quarts can be injected into a man weighing 150 pounds without even an unfavorable symptom. It was also demonstrated that it required salt solution 1½ times the total quantity of the dogs blood to produce death —if the analogy still holds good it would require about 11 quarts of the salt solution to kill a man of 150 pounds weight. This is truly astonishing, and while we would hardly be justified in going to such extremes either in abstracting blood or injecting the solution, we are forced to the conclusion that the circulatory system is capable of a very wide range of adaptability, and that the abstraction and watering of the blood have heretofore been far too limited to give the best results.

It has been claimed that the pulse is the best guide in administering the solution. This is true to a limited extent only, for it has been demonstrated that after the primary effect of stimulation is over the vessels accommodate themselves to the quantity of fluid injected in such a way as to keep the blood pressure at a uniform standard, and it is a *fact* that although the injection may still be continued death will ensue without an additional rise in blood-pressure. When the injection is continued beyond primary stimulation we should not look for a continued *increase* of pulse-tension but rather for a quicked pulse and increased respiration, for, when the blood is surcharged with fluid there must of necessity be an increased number of heart-beats and respirations in order to give a normal amount of oxygenation. This is borne out by a recent case upon which I operated for gun-shot wound of the abomen, in which, however, there had been no hemorrhage, but where there was a marked increase of pulse and respiration after the first two quarts had been injected and which only subsided when the injection was discontinued.

I recently heard an eminent physician say that he had never seen any good results from the intra-venous. I too have seen it fail, but so far as the procedure is concerned I believe that the failures were due more to the small quantity of fluid used than to any other one feature. While, therefore, I would not suggest such extremes as would seem to be even justified, I would in all cases where the blood needed an *immediate* unloading of its poisonous material, strongly urge much larger quantities, both in the matter of depletion and dilution, than have heretofore been done.

If then the experiments upon the dog have given even a proximate estimate of what the human being can stand, we may justly expect to lower our mortality-rate not only in uræmia, but in all conditions of toxæmia and septicæmia, at a very early day.

DISCUSSION.

Dr. W. L. Robinson.—This is a question of great interest and one in which I have been interested myself. It seems most rational that if you can eliminate from the system the poison by bleeding a patient and then supplying a normal salt solution, that it ought to be the most radical and satisfactory relief in that case. The question might naturally be asked by those who heard the paper on the extraction of blood and control of convulsions, whether or not the convulsions might have been controlled by simple expedients. It is rational to have given credit to saline injection. I would make one suggestion in addition that the doctor didn't bring out, and that is in those cases where there is a very weakened circulation,

that it would be well for intravenous use to place your saline solution within the vein before you stop the abstraction of blood from the other arm, or else you will find some difficulty.

Dr. Knowlton.—I would like to mention one point as regards the technique of the operation. It is a very simple operation, but I have seen several very good surgeons fail to perform it, and just at the juncture when the operation was extremely necessary. It is this: I think it is unwise to tie the vein above until after the vein is thoroughly exposed. If you cut down upon the vein after it has been tied, the vein is tense, and much more liable to be wounded, and if you wait until after it is tied it is fully distended and the puncture is much easier. In other words make the incision *first*, then do the tying, then the puncture.

Dr. Barringer.—While not bearing directly on this subject, I have endeavored to systematize the influences of all toxæmia and to bring about a systematic way in which to present this to students, which I think I can present in less than five minutes. Whether it be septicæmia, or toxæmia, or uræmia, I think our forces are limited to three things. We can flush the center, we can dilute the poison, or we can diminish the rapidity with which the poison is applied to the centers. You have all seen morphine, chloral, and that class of drugs relieve convulsions by flushing the centers. By bleeding you can remove a certain amount of poison, but unless a man is extremely plethoric we hesitate to bleed where we know that we can by slowing the circulation with veratrum veridi and its class, bring down the portion of blood passing through a center in a given time to a minimum. If the toxæmia is so great that even when the center is flushed as by chloral, where the blood is brought down as bleeding, convulsions still occur, I think under those circumstances, and in those cases only is it wise to still carry further the amount of bleeding and then substitute saline solution, which is not in any sense a vital fluid. Saline solution in those cases simply renders more easy the action of the heart in supplementing the amount of blood removed.

The Medical Treatment of Appendicitis, or Appendicitis Without Operation.†

By Charles B. McAnally, Madison, N.C.

My excuse for presenting this paper to you is that my own experience does not always teach me that every case of appendicitis demands the treatment that now seems so universally popular, not only with surgeons, strictly speaking, but also with the profession generally, and I mean by that surgical interference.

During my few years of professional work it has been my good fortune to be confined largely to the practice of general medicine. Having this work, both in town and country, you will readily understand the advantage such a situation is to the observation of any special disease or diseased conditions. We all, every day of our professional life, see the vast difference of disease, even of its characteristics, as found in our patients in the various professions and environments of individual cases.

My experience with appendicitis began almost in the very commencement of my practice ten or twelve years ago. But with one or two exceptions I have never been fully convinced of the necessity of an operation for its relief, and these exceptions were in cases receiving no medical treatment until there was extensive local peritonitis complicating the primary trouble. The history of five cases occurring in my practice, and three in that of Dr. W. J. McAnally during the past eighteen months will be sufficient to demonstrate what has caused me to be, perhaps, over conservative as regards surgical treatment of these cases. I would not for a moment have you understand that I do not believe in operating for the cure of a great many of these cases, for I do know there are cases that only this will offer any hope. Even some of the cases that are relieved by medical treatment will, I doubt not, ultimately demand the entire removal of the appendix and its surrounding irritating, inflammatory products. Sept. 30th, 1897, I was called to see (S. G.) a young man 17 years of age, farmer, good history, etc. I found him in bed, lying on his right side, with his knees brought forward towards abdomen, face rather pale and somewhat drawn with small red spot on cheeks, eyes bright and watchful, tongue large, white-coated and pointed—brownish on back part, breath very offensive; complained of severe pain in right iliac region, sometimes radiating up beyond umbilicus. No appetite, not able to rest for three or four days prior to my visit, and gave following history:

Five days before this was in field pulling fodder when he noticed a slight heaviness in his lower right abdomen and felt disposed to take shorter steps with his right foot than with his left, and that it relieved him to lean forward and keep his body, as regard-

†Read before the Tri-State Medical Society of the Carolinas and Virginia, at Charlotte, N. C., January, 1899.

ed his right leg, as nearly immovable as possible, and in a slightly forward position. He finally came home and laid down for a few hours, then got up and walked about a little but all the time had that uneasy feeling in 'lower right side.' He passed two days this way with only a little more pain, etc., until the third day when he was compelled to take to his bed and had remained there, suffering more and more each day. Bowels had moved during first two days one time each day, and one time during the last three days, and had eaten nothing since he first complained. I found his temperature 102 degrees, pulse 98; extremely tender over the right iliac region, no distension of bowels except skin just a little tense and full over the tender area; lying on his back he could lie flat, but would almost immediately flex his right leg on his body saying it gave him pain in his bowels or right side to straighten out.

I made diagnosis of appendicitis and prescribed and gave calomel and bi-carbonate soda, gr. xv. each. M. Sig. Div. 15 powders. One every half hour until all given. This was at 4 p. m., and was to be followed early next morning with tablespoonful of Epsom salts. I also prescribed thirty drops Spirits Turpentine internally and stupes to bowels under warm applications of bran, meal or wood ashes. In case this did not relieve pain I left ½ doz. ¼ gr. doses sulph. morph. to be given every hour until four were taken or relief given. I saw him next day at 2 p. m., found his general condition about the same, temperature 101, pulse 115. Tenderness still severe but had gotten a little sleep after taking two doses of morphia; bowels open freely, urine free, no appetite; a little increase of the tension over tender region. Former R. repeated except acetanilid and caffein were given instead of morphia.

Not being fully satisfied with his condition I asked for a consultation and next day at 4 p. m. I saw him with Dr. C. Patient was much better in almost every respect. Had had copious stools, rested well four hours and had asked for a little milk. Tympanitic quality of bowels about the same, temperature 101 degrees, pulse 110. Pain very much relieved. Tongue still heavily coated and breath foul. The doctor agreed with my diagnosis and recommended the treatment continued, which was done except only enough of the purgative was given to keep bowels freely open. Patient made an uninterrupted recovery, and within two weeks was able to be out at his usual work. He has had no unpleasant symptoms from it since.

Case No. 2 was T. W., a school-boy, 12 years old. Gave following history: Was playing at school when he noticed that he was inclined to bend forward toward his right side when he was running. As he went home in the evening he found himself able to walk all right, but was a little sore in the lower right side of bowels. This was Friday. Saturday and Sunday he felt irritable, without appetite and general feeling of drowsiness with slight pain in the lower right side of bowels and up above his navel, and spent his time lying about. All these symptoms increased until I saw him on the Thursday following. He had not been back to school. I found him lying on his back, with right leg flexed, unable to lie any other way with comfort; very tender over right iliac region, very considerable tympanitis, but no tenderness at any other point. Pulse 102, temperature 102½. Bowels constipated, very thirsty, no appetite, not able to sleep. Same treatment as in former case except acetanilid and caffein given with the morphia and turpentine every four hours.

Saw him next day; found temperature 103 pulse 110, stools five since I saw him the same time the day before. Treatment was continued twenty-four hours when I found him much better, but with considerable tenderness over the region of the appendix. The mercury and soda were continued in half quantity which was deemed sufficient to keep bowels free three or four times a day; only liquid food allowed in any case and at end of ten days patient was up but carried himself a little stiff with the muscles of right side for a week or two more. In this case I am confident there were adhesions of some extent as upon close examination there was tenderness and some fullness over the region of first tenderness. But no further trouble has come to him and if there was an unopened abscess there it has not so far given trouble.

Third case—Young man 26 years of age, family history good, personal history good. Was taken on 18th December, 1898, with severe pain in bowels. He thought he had "cramp colic." Took a big dose of whiskey, got some relief for a few hours, but still had cramping pains in lower right side of bowels low down even below the region of appendix. I suspected strangulated hernia from his immediate condition, but on close examination I found tenderness of the iliac region, no appearance of any scrotal hernia and no tenderness up the cord. The muscles were held so tense I could not satisfactorily distinguish any tumor. This patient had been very sick at stomach, but was somewhat relieved of that before I saw him. Found temperature 100 pulse

108, deeply coated tongue, breath very offensive, bowels constipated. I at once gave calomel and soda as in previous cases, and had an enema of hot water, castor oil and turpentine given at once, with directions to repeat every two hours until free evacuation of bowels was secured. Also gave morphia and acetanilid four ¼ grain doses of morphia to be given, one each hour until relieved of pain. Acetanilid given in five grain doses every two hours for three doses, then to be given every four hours. Saw him next day, found him well purged, water free, temperature 99 deg's. pulse 90. Diet was regulated and treatment continued but modified as symptoms were relieved Seven days after patient was up and has suffered no relapse.

The other two cases in my own practice were similar except the pain in the beginning was high up and was only localized at appendix after first twenty-four hours. The treatment was same, and all recovered.

The following three cases were reported to me by Dr. W. J. McAnally, as above mentioned:

Case 1. Mrs. C., age 29, was taken with severe pain in right iliac region, Jan. 24, 1898. Fever, headache, anorexia and constipation followed the occurrence of pain in the abdomen and on the 25th I was called to see her. Found the patient lying on her back with right leg drawn up and the abdominal muscles, especially of the right side, were very rigid. There was marked tenderness over McBurney's point, and the pulse 104, temperature 102.5 deg's., tongue coated, no desire for food. I prescribed ʒss Epsom salts at onee, turpentine stupes over the tender point, and one grain doses of a powder 70 parts acetanilid, 20 bicarbonate Soda, 10 citrate of caffein every 3 to 4 hours with gr. ⅛ of morphia as often as necessary to keep patient easy, grains v of quin. sul. tid., and allowed no solid food; gave milk in small quantities every 2 to 4 hours; albumen water and egg-nogs were taken several times a day. With this treatment the patient was kept right easy and fever was never above 103 degrees. The Epsom salts was given every evening, and from one to two moves from the bowels secured each day. The patient vomited several times during the attack but I thought perhaps the morphia caused it. At no time during the sickness could I detect a tumor. But on the 7th day about one ounce of pus was passed with the morning evacuation. There was no more fever and all symptoms gradually subsided except the tenderness over McBurney's point. The patient was up doing her work in another week from the time that the pus was passed, but she was weak and pale. The tenderness never did entirely leave, and about six weeks after the first attack she had a second one much less severe than the former. The same treatment brought her out again in 3 or 4 days. Tenderness all subsided after this and she had no more trouble. Good's peptomangan was given to build her up.

Case 2. Mrs. M., age 42, on the 9th of June was taken with severe pains in the right iliac region. The same day I was called to see her. Found temperature 101, and pulse 99, much soreness in region of appendix; abdominal muscles on right side were tense; tongue coated. Diagnosis appendicitis. Gave about same treatment as for case 1. Fever did not get over 102, and in six days she was up and going about the house. She had some soreness about the appendix for several weeks and was anemic. Gave Tinct. Ferri chlor. ♏. v to xv, doses tid., and she soon improved, and has since had no trouble.

Case 3. Mrs. D. I. C. during the second week in August, 1898, complained of pain and soreness in the right iliac region but as she had given birth to a two-pound boy the 20th of July she thought this soreness was the result of the labor. On the 10th of August I was called to see her; temperature was 103, pulse 108, tongue was coated and it was easy to feel a tumor in region of the appendix. Patient was of course in bed, and had been there two days when I first saw her. The abdominal walls were tense on the right side and the right knee was drawn up. Diagnosed appendicitis and followed the same plan of treatment as used in cases 1 and 2. The morphia kept the patient tolerably comfortable and the Epsom salts moved the bowels nicely each day. The feeding was the same as for the other cases, and with this simple treatment she got along nicely. On the 16th she passed several ounces of pus, and for three days after this a little pus was seen with each passage. All the symptoms except the soreness disappeared almost immediately. As late as Nov. 10th she would feel sore in her right side after a walk of a half mile.

The advocate of operative intervention in all cases of appendicitis advise early operation. Some even go so far as to say that it must be done within the first twenty-four hours.

I have no hesitancy in saying that to follow this rule absolutely there would be no operations as in 95% of the cases we see we are not called until the third or fourth day. We may sometimes be called earlier when the attack is preceded or ushered in by these sympathetic pains above the umbilicus, or

over the region of the sympathetic ganglion. These are the cases of colic we often meet. Prof. Nothagel, of Vienna, one of the leading clinical observers of the world declares that more than 80% of all cases of appendicitis will recover under medical treatment. He, however, like the late Prof. A. L. Loomis, advised the opium treatment and not the combination treatment I have mentioned and used. My experience has been so satisfactory with my own treatment that I shall hesitate to depart from it until, at least, I meet with such reverses as shall justify the change. I wish to say just here that I think perhaps after the initial treatment with the mercurial, almost any of the various evacuants would answer in its stead. I have seen thialion (a laxative salt of lithia) highly recommended in similar conditions but have never used it myself.

Pseudo-Membraneous Enteritis.*

By J. M. Fladger, M. D., Summerton, S. C.

In presenting a paper on the subject selected, I do not claim to give anything new to the profession in regard to the pathology, diagnosis, or treatment of this disease.

But as it is a rare trouble, perhaps not having been treated by many present, and also as the history of the case to be presented for your consideration differs, in so many respects, from the usual course of the disease, that it is indeed unique.

The definition given in the books, is as follows: "A non-febrile affection, consisting in a peculiar, and usually *persistent*, morbid condition of the mucous membrane, marked by the periodical formation of viscous, shreddy, and tubular exudates, on the discharge of which amelioration of all symptoms occurs."

We have no accounts of this trouble in the writings of the ancients, and indeed nothing describing it as a distinct trouble until about the eighteenth century, when some writers speak of the tubular exudate, associated with diarrhea and dysentery. It was not until the year 1818, that Powell recognized it as a distinct trouble, and since then it has had a place in nosology. It is rarely seen in childhood—mostly between the ages of 40 and 50. Females are much more liable to it than males, and the blonde type—light hair and fair complexions—but without consuming your time in giving a general history, I will proceed to give that of my patient.

On March 29th, 1895, was called to see Nannie, daughter of Rev. C., a robust and healthy child of five years, dark complexion, black hair and brown eyes. Found her suffering with an acute gastritis; temperature 102, pulse 115, and respirations about 30. The tongue was coated with a heavy white fur, and the nausea and vomiting were most distressing.

I prescribed calomel 1-10 gr. with sacch. pepsin every hour; warm applications over the epigastrium. &c., with only partial relief of symptoms. On my second visit that day, found her extremely prostrated. As the integrity of the stomach was not improved, I commenced to use nutritive enemata, alternating liquid peptonoids, with bovinine and milk, and later brandy was added, according to indications.

The case went on for a few days with little or no improvement in the gastric symptoms, but the coated tongue was succeeded by an intensely red and sleek one, attended with a very *high* temperature and great restlessness. Locally I used mustard, turpentine, poultices, &c., with a final resort to a blister of Spanish flies. I should add that the materia medica was exhausted in the use of remedies internally, and with the assistance at times of two medical men, the relief was only temporary. The thirst was most *intense* and *distressing* throughout the course of the disease.

Her appeals for water, that would be rejected as soon as swallowed, were indeed pathetic. When convinced that she could not retain it, she insisted that her brother and sister should drink it, and even guests at the house were importuned to do likewise. This was about the third week of her illness. There was never any marked tenderness over the abdomen, nor was there any tympanitis, but rather a depressed and sunken appearance of the whole area.

As I lived near, I visited her three or four times a day, and watched the case very carefully. The gastric symptoms were so urgent that my mind was not at all prepared for the peculiar sequelæ about to be described.

About 3 o'clock in the afternoon I was hastily summoned to her bedside to be told that she was sinking rapidly. Every appearance of the patient confirmed that opinion. A cadaverous color of skin, bathed in a cold sweat, no pulse at the wrist, respirations 40 to 50 to the minute, and every symptom pointed to a rapid dissolution.

I remained with her for several hours, and to my surprise, about 7 o'clock she began to rally, and under the influence of stimu-

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lants she soon regained consciousness. I regret that I did not keep a daily record of symptoms, but soon after this my attention was called to the peculiar character of the discharges. Floating in a thin liquid I noticed shreds of membrane, mucus, &c., which at first made me think of dysentery, but that was too contradictory to all the symptoms.

Here was a bowel retaining and absorbing all the nourishment she had taken for three weeks, with little or no tormina or tenesmus at stool, so I was compelled to await developments before giving a *positive* diagnosis. The gastric symptoms improved rapidly from this time, but the emaciation was extreme, such as is seen in typhoid about the fourth week. The father was a very intelligent gentleman, and I requested him to examine carefully all the dejecta. From time to time, but not constantly, did these exudates appear; but one morning he showed me a piece of the tubular variety, six inches or more in length. My diagnosis of pseudo-membranous enteritis was then made out. The treatment was supporting internally, astringents locally; first the vegetable, but later, nitrate of silver, 10 grains to the ounce, introduced through a rectal tube 12 inches long.

The digestion was then so much improved that she took readily liquid nourishment in the normal way. These applications of silver were made once a day until symptoms of absorption were noticed in the skin, when they were discontinued. Under full doses of iodide of potash the skin cleared rapidly, and I then considered her convalescent. As soon as practicable, and on account of the near approach of hot weather, a change to the up-country was suggested. She continued to pass shreds of membrane for about three months, and had a slight attack of indigestion while away, but with this exception her convalescence, though slow, was uninterrupted. When she was advanced far enough to begin walking, she lost all power of co-ordination and had to be taught as an infant. I have given a very imperfect history of the case, and will recapitulate in so far as to show the variations from the normal course of the disease.

1st. The patient was a child of five years, whereas all reported cases are adults.

2d. The attack was ushered in with the most alarming symptoms, attended by high febrile excitement.

3d. The course of the disease was much shorter than usual—most cases assuming a chronic character and running on for years.

4th. Complete loss of motion, and later of co-ordination.

I have not seen the case for three years, but from last accounts she had made a complete recovery, developing rapidly, both mentally and physically.

DISCUSSION.

Dr. S. C. Baker.—I would like to ask Dr. Fladger a question in reference to this case. I would not like to enter into a discussion of the paper from his standpoint. I would like to ask if there was any deposit from the throat in any way.

Dr. Fladger.—None at all.

Dr. Baker.—It simply occurred to me when you spoke of loss of muscular power later on in the disease that perhaps it was a diphtheritic affection. It seemed to me possible that diphtheria might attack the stomach and intestines without being observed in the fauces. I simply wanted to ask the question.

Dr. W. L. Robinson.—I would like to ask in the same line whether or not there was much pain connected with the first stage of this affection.

Dr. Fladger.—No, sir, no great pain, not so much as I expected to see.

Dr. Robinson.—My motive for asking was that I have had two cases of intestinal diphtheria, one about five years ago, in which we were slow in diagnosing because the symptoms of diphtheria were not developed elsewhere for some little while. In that case there was intense pain, the patient for days had to be kept under the influence of anodynes given in large quantities. However, large portions of the mucous membrane were thrown off, and it was demonstrated later that it was a case of diphtheria. In the last eighteen months I had a similar case of intestinal diphtheria who was more easily diagnosed on account of the experience with the first. The anti-diphtheritic serum promptly relieved in a few days; the cast of the bowels being thrown off and subsequent manifestations on throat proved diagnosis—both recovered.

The case of the essayist was a most unusual one, difficult of diagnosis. Sepsis, I doubt not, entered largely into the course of the disease, and helped to baffle the doctor's efforts. In such cases, when the stomach will not retain and the bowel is irritable, I have used the saline solution (with Valentine's meat juice added) injected under the mammary glands with decided benefit. In post-operative cases it is especially useful.

Dr. Crowell.—I would like to ask the Doctor if he said the patient had no rise of temperature. I thought he stated there was no temperature.

Dr. Fladger.—You are mistaken, the temperature was high all the time.

Dr. Hugh T. Nelson.—Almost all of us under certain circumstances have observed cases of pseudo-membranous enteritis. In a large female school not very far from the town I live in, some eighteeen years ago, there were several cases of what was thought to be and I suppose undoubtedly was diphtheria, which we hadn't the means of determining then as we have now. Two of those young ladies were very ill, and one of them died. Another one during the illness of these two cases gave no evidence to any of the physicians in attendance of any diphtheritic deposits and symptoms of enteritis, and it went on, prostration became very great, and she went on and died. Of course we made no analysis, but the opinion of the physician in attendance was, a case of diphtheritic enteritis. The case was carefully watched, but there never was any indication of any trouble of this kind until these evidences came, from the bowels. I am certain this was a case of genuine enteric (or enteritic) diphtheria. I don't think she was sick over seven or eight days from the time she was taken ill.

Report of a Case of Appendicitis, Complicated with Intestinal Perforation—Recovery.†

By George W. Long, M. D., Graham. N. C.

My reason for not attempting a discussion of the diagnosis, pathology and treatment of appendicitis is simply because I know I am not competent to pass upon it. Information gained, however, from examining work already done by others that are competent authority, and my own limited experience, leads me to believe that it is possible for a general country surgeon, who is simple and clean in his surgical work, and methods, who uses his own common sense, and does not try to follow any body's special method, to add greatly to the conservation of human life. To emphasize this thought, I will briefly give you some of the salient points of a case which recently came under my own observation.

The patient was too poor to secure the services of an expert surgeon, or to go to a hospital for treatment. Mrs. T. S., aged 19, colored, mother of two children, consulted Dr. George W. Kernodle, September 12th, 1898, complaining of slight fever and soreness over the abdomen, which the doctor suspected might be the beginning of an attack of typhoid fever. Appropriate treatment caused patent to become much more comfortable, but never so much so as to permit her physician to feel that all was well. September 19th, 1898, the doctor was called to find her aborting. October 1st, she was moved in a wagon, on a bed, half a mile. October 7th, Dr. Kernodle called me in consultation.

She presented a picture, coupled with the previous history, which pointed unmistakably to pus in the right side of the belly. We informed her and her friends that we thought she had appendicitis, and although the outlook was not promising, the thing to do was to open, at once, the belly and liberate the pus. Accordingly, with the best aseptic precautions possible, under the circumstances, with our crude environments, under Squibb's ether, a large quantity of foul pus was liberated by an incision several inches long, in the usual locality. At the time, Dr. Kernodle suggested that the pus had a fecal odor. I have to regret that I failed to appreciate his valuable suggestion, as will appear later.

Having made several ineffectual attempts to find the appendix, we decided to make a counter opening in the lumbar region, improvise a drainage tube out of soft catheter, irrigate with warm saline solution, and pack with gauze. The patient reacted nicely, ordered light, nutritious diet, absolute rest, dorsal decubitus. Dr. Kernodle resided near by, and gave her all necessary attention for about a month, watching her general improvement; the posterior wound healing up all right, but the one in the abdomen only partially so.

One month from the first operation I was re-called, and in this consultation we had also the valuable services of Dr. J. L. Kernodle. The discharges from the abdominal wound were decidedly fecal, and Dr. Kernodle informed me that gas and ingested material had been escaping ever since my last visit. We decided to enlarge the opening and proceeded under ether, as before, commencing just below the border of the ribs, an incision was carried down to and below the McBurney point, opening up probably, a larger field than an expert would have required. We found a large opening in the lower portion of the ascending colon with very necrotic, ragged edges. The perforation in the bowel was so large that Dr. Kernodle easily carried a large sized sponge in his hand well up into the colon. The appendix was finally found, though with considerable difficulty, ligated about one-eighth of an inch from the cæcum, with silk and cut off. Apparently it was perfectly normal and healthy. A longitudinal section of it, made at once, revealed

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two very small substances, possibly the size of hemp seed, which we supposed were enteroliths. The ragged edges of the rent in the bowel were trimmed with scissors, sutured with a common cambric needle, armed with silk after Lembert's method —the peritoneal surfaces of the bowel being brought together. A warm saline irrigation, a gauze packing, over this absorbent cotton, an abdominal bandage, to be changed as indicated, bowels to be bound, absolute rest, opiates if necessary, light nutritious diet, dorsal decubitus, constituted the treatment. The bowels acted by enema one week from the operation, and have been moving satisfactorily ever since. The abdominal wound had about healed the latter part of December, which was the last time I saw the case. The cure seems to be all that could be desired. Patient able to walk about the house, though advised to resume customary work gradually. I was not surprised at finding the perforation in the bowel, especially when I recalled Dr. Kernodle's suggestion in the first operation, but I was at a loss to know how such a fine, healthy looking appendix could be consistent with an appendicitis, complicating intestinal perforation. Whether the removal of the appendix was right or not is still to me a *questio vexata*.

DISCUSSION.

Dr. J. W. Long.—The paper to which we have just listened is an interesting one and represents one of the complications that we are liable to find in appendicitis. While the doctor was reading his paper my mind ran back over some of the cases of appendicitis I have seen, and I recall two, possibly three cases where the appendicitis was complicated by a perforation of the secum. One case I remember distinctly was where the perforation was just at the base of the appendix and took in perhaps two or three lines of the secum proper. In other words, there was a perforation which embraced the size of the base of the appendix, or the secum. I do not recall that in these cases I made any effort more than I do in an ordinary case of sloughing, perforated septic appendix. The appendix in each case was perforated and the dressing employed; that is the drainage because the amount of sepsis from it would have been more than improper to have closed an opening of this kind without drainage, as the chief object is drainage.

A woman at No-Name Pond, Me, says the Boston Herald, has recently given birth to her twenty-fifth son.

Headache--Ocular and Nasal.†

By Joseph A. White, A. M., M. D., Professor of Eye Diseases and Associate Professor of Ear, Nose and Throat Diseases in the University College of Medicine, Richmond, Va.; Surgeon to the Richmond Eye, Ear, Nose and Throat Infirmary; Member of the American Ophthalmological Society; The American Laryngological, Rhinological and Octological Society, etc., etc.

Headache or neuralgia, intermittent or constant, periodical or continuous, is one of the annoying pathological conditions, that confront the practitioner at every turn in his professional work. Its etiology is frequently a problem as hard to solve as any abstruse question in astronomy. Remedy after remedy fails to give relief, and both physician and patient are in despair of ever getting rid of what, for want of a better name, is denominated "nervous headache or neuralgia." And yet this term, chosen at random, designates exactly what it is, a reflex irritability of the tri-geminal branches from easily explained causes, which have only been thoroughly investigated by specialists in the last twenty years, although occasionally referred to by some writers during the last two centuries. I do not propose, therefore, to discuss any new proposition, but simply to submit well known facts to refresh the memory of those who know as much of this subject as I do, and to arouse the attention of others who may have overlooked them. If you will recall your professional reading to mind, very few of you can remember many references to the influence of eye and nasal troubles in the production of headache. Even in the text-books on Eye and Nasal Diseases, except in a limited number issued in the last few years, little or no importance is attached to this subject. It is true that in speaking of "asthenopia," headache is sometimes given as a symptom, but no special stress is laid upon it. As short a time back as 1888 (only ten years) Corning's book on headache and neuralgia, although dedicated to a prominent occulist, practically excludes the eye and nose in the etiological consideration of the subject. It seemed to me, therefore, an eminently practical matter to bring before this body of busy and intelligent medical men, who meet together to receive and impart information that might prove of mutual interest and benefit to them or their patients.

We constantly meet with cases of head-

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ache in persons of all ages, which, with a little careful questioning, can be traced directly to its startpoint in the use or abuse of the eyes, because it occurs only when the eyes have been used continuously at close work, and as a further confirmation of this diagnosis, there is no discomfort when eye work is discontinued. Moreover, the eyes themselves give other symptoms calling attention to them, such as smarting, congestion, and soreness. All of us are familiar with such cases. It is the ordinary picture of asthenopia or weak eyes, whether due to refractive or muscular defects. It is these cases, to which the older text-books referred, when headache was mentioned at all as one of the consequences of laborious eye work; yet in some of them medical observers were led astray by the severity of the head symptoms into attributing them to cerebral causes.

When the headache is frontal or temporal, and is accompanied by unmistakable symptoms of eye trouble, and can be shown to follow upon use of the eyes, few physicians will make an error in diagnosis; although, even when we have such a clearly defined clinical picture, I have known cause and effect confounded, in as much as the patients have been told that the trouble was malarial, rheumatic or stomachic neuralgia, and that the weak eyes were caused by the pain(?).

But many of these cases are far from clearly defined. When we meet with subjects of chronic cephalagia, especially with pain in the parietal and occipital regions, or with frontal and temporal neuralgia accompanied by stomachic disturbances, we are not apt to look to the eyes as the starting point of the trouble, especially if vision is apparently perfect, and there are no local ocular symptoms to guide us. I have seen hundreds of cases of headache from latent defects who never thought of their eyes in connection with this trouble, because of their vision, and only had their attention directed to this possible cause, after all treatment failed them, by some one who had gone through the same experience. Frequently these subjects are dyspeptics and suffer from habitual constipation, or are of rheumatic habit with excess of uric acid, deficient excretion of urea, and defective liver action, and in consequence the physician is led further from the true source of the trouble, in ascribing it to these apparent causes. Again we meet with subjects where both physician and patient are at first satisfied that eye trouble, probably some marked refractive error, is the cause, and being disappointed because its seemingly perfect correction does not give the expected relief, at once eliminate the eyes from any further etiological consideration and branch out in other lines in the search for its causation. Eye strain, causing local or reflex discomfort, comes at times from so many differing ocular conditions that the expected results are not always achieved by even the perfect correction of the more pronounced defect. Temporary relief is often obtained, to be followed later on by a relapse from the irritation set up by the slighter uncorrected error, whether of refractive or of muscular equilibrium. Moreover, these defects are frequently grafted upon a neurotic constitution that readily responds by reflex nervous disturbances to the slightest local irritation, and unless all the trouble is thoroughly corrected no permanent result is achieved.

The ocular causes of headache, neuralgia, etc., etc., are either defects in the shape of the eyeball, refractive errors, so-called,such as near sight, far sight or irregular refraction (astigmatism); or lack of proper balance in the muscles that move the eye(muscular error); or both combined. As the latter for the most part depend upon the former they are usually associated,although we often find refractive errors without interference with the muscular equilibrum, and occasionally defective muscular balance without refractive errors. Hence it is that *the adjustment of glasses* does not always cure the reflex effect, even when apparently the restoration of vision is perfect. Swanzy in the last edition of his book, says, "Astigmatics (i. e. people who have an irregular refractive condition of the eyes) frequently suffer from headache due to constant effort to see distinctly, and we cure the headache when we correct the astigmatism." Whilst in the main this statement is true, it is not invariably so,because these subjects are sometimes sufferers from imperfect muscle balance, which does not adjust itself, even after the correction of the optical error, which might have been its primary cause. In the perfect adjustment of the muscular defect, as well as the correction of the optical error, lies the secret. And yet many ophthalmologists overlook this point, due to the fact that lack of muscle balance may be latent, being concealed by tension of the recti muscle, just as refractive errors, especially far sight and far sighted astigmatism, may be latent, concealed by tension of the ciliary muscle. It sometimes requires the most persistent and repeated efforts with prisms to reveal it, especially if the defect is a lack of accurate leveling of the two eyes, or so-called hyperphoria. I have seen cases of one or two degrees of hyperphoria that manifested not

the slightest trace in the ordinary examination with the phorometer (an instrument of precision arranged with rotary prisms to measure defects of the ocular muscles), just as we have all seen cases of far sight and low grade far sighted astigatism that could not be improved in vision by any glass, as it was already perfect. The use of a mydriatic, however, promptly reveals the latter defects by depriving the accommodative muscle of its excessive tension and power of correcting the defect; but the artificial double vision, given by the *horizontally* placed prisms in the phorometer for the detection of hyperphoria, does not always relax the undue tension of the superior and inferior recti, which conceals the muscular error. Strange to say this very rarely applies to the *vertically* placed prisms, as the deviation of the eyes in or out, known as esophoria and exophoria, are almost invariably detected by this means. In fact, as exophoria, or outward deviation of the eyes, is often an expression or result of the defective vertical balance, caused by the latent hyperphoria, its presence is sometimes the only clue we have to the existence of the latter; and especially is this true, if, when measuring the strength of the internal and external recti by prismatic exercises, we find they both approximate the normal standard, notwithstanding the apparent outward tendency. I have a case in my mind that came to me several years ago from a distance, a young woman of neurotic tendency who had long suffered from persistent headache, for which all kinds of treatment had been instituted, not neglecting the uterus in the general search for the cause, but without avail. A suggestion that her eyes might be a factor in her trouble brought her for examination. I found low grade astigmatism with oblique meridians, and felt satisfied its correction would relieve her. It did, but the effect was not lasting, and inside of two months she was back again. The phorometer gave me no encouragement to hope that I would solve the problem, as there was apparently no lack of muscle balance, but when tested the strength of the superior recti with vertically placed prisms, I found such contradictory results in different sittings that I was confident there was some hyperphoria. I made her wear a prism with base up before one eye for several days, when the defect became slightly manifested; but in a few hours after taking off the prism, there was a re-establishment of the muscle balance. After two weeks of this experience, I decided to cut the superior rectus of the apparently higher eye. I did a partial central tenotomy, and on using the phorometer to see the result, found a still greater degree of hyperphoria manifested, because of the traumatic disturbance of the abnormal tension of the vertical muscles. I increased the effect at once until the eyes were leveled. All discomfort disappeared and up to this time, several years after, she has had no further trouble. This case shows how difficult it is at times for even an expert to make a positive diagnosis.

Refractive cases are equally puzzling at times. Even when the correction of the defect is apparently all that could be desired after a thorough examination under a mydriatic, with resulting perfect vision, headache will persist. This is due sometimes to neglecting to incorporate a low grade cylinder for a correction of a slight astigmatism with the spherical lens, whether in far sight or in near sight, but especially in the former defect, and this is particularly the case when the astigmatic meridian slants or is oblique. The greatest care is required in the adjustment of such a cylinder, because if it is not exactly in the correct axis there will be no relief. It is astonishing at times what a slight variation in the position of the cylinder will make or mar the result as far as comfort is concerned, although the variation in vision may be almost imperceptible. Repeated subjective examinations, the astigmometer, and retinoscope all must be brought into play to give the most harmonious results.

It is these cases of slight refractive errors, especially if combined with latent defective muscle balance, that present the greatest difficulties. I have seen many patients whose lives were made miserable by constant pain in the back and top of the head whose vision was perfect and with eye muscle balance apparently normal, and yet the pain was due to eye strain, from the unintermitting effort to keep vision perfect and the muscle balance normal by overcoming a low grade astigmatism and a slight muscular error, as in the case above referred to. In some, glasses alone give relief; in others, prism exercises are required; and in a minority of them adjustment of the muscle balance by operation is necessary.

It is curious that the most marked refractive errors and the most decided muscular defects, amounting even to strabismic deviation, are not the ones that give the most trouble in regard to headache, neuralgia, etc. It is true that headache frequently results from the effort to overcome high degree of far sight and astigmatism, and also from the excessive demand upon the converging muscles in marked near sight. But these cases are usually those that give most satisfactory results from proper adaptation

of glasses, either spherical, cylindrical or prismatic. Occasionally, however, we find the muscular defect out of all proportion to the refractive error, amounting sometimes to latent double vision (which becomes manifest by placing a red glass over one eye), or even to the abolition of binocular vision, and this too without any *apparent* deviation of the eyes from parallelism. You can easily understand how great the strain on such eyes must be, and the natural irritation that must arise from the continual effort to coalesce or ignore the double images in the field of vision.

If time permitted, I could give many interesting examples from my case book of these conditions. I will refer to one, however, because of its interesting features and its satisfactory result.

It was a married woman, the daughter of a physician, who had been a great sufferer for years, which she attributed to an annoying form of indigestion, called by her physician "nervous dyspepsia," and which compelled her to confine herself to the most rigorous diet. She had a decided refractive error, accompanied by defective convergence, amounting at times to double vision without apparent outward deviation. The correction of the optical error by glasses improved her vision and allowed her more latitude in the use of her eyes, but with slight modification of her attacks of headache. I advised her to allow tenotomies to be done to correct the muscular defect, and she consented to the operationf. The result was the correction of the muscular error, the cessation of the headache, and the restoration of a good digestion, all the symptoms of so-called nervous dyspepsia having disappeared. These had evidently been manifestations of a reflex nervous disturbance emanating from the local irritation caused by the eye strain.

Sometimes I have cases referred to me suffering from recurring frontal headache, pain in the top of the head, or neuralgia of the first or second branches of the trigeminus, supposedly caused by some ocular defect, especially when the pain, as it often does, involves the eyeball itself, as well as the surroundings of the orbit. The most critical examination of the eye fails to reveal the slightest optical error or defective muscle balance, practically excluding the eye from being the causation, and necessitating investigation in another direction. What is more natural than to look to the upper air passages, so richly supplied by branches of the trigeminus, as a possible location for the origin of the disturbance in the domain of this nerve, whether congestive headache, migraine or neuralgia? If a person has neuralgia in the lower jaw, you do not go to the lower end of the spinal column to look for its causation. Even if there is no local pain in any special tooth, you would naturally expect some trouble of the teeth, and look there first for the possible origin of the irritation in the domain of the inferior maxillary. Is it not logical, therefore, to search, first, at home for the trouble in the domain of the other two branches of the trigeminus, namely, in the ocular and nasal regions? If the eye fails to show any cause of the irritation, it is not unwise to explore the nose and post-nasal space. So many head pains originate from these two centres of irritation that their causation being demonstrated and corrected, we will have only a minority of cases of uncertain origin left to lay at the doors of imperfect digestion, malaria, rheumatism, uric acid, etc. So many facts in support of this statement are recorded in latter day medical literature, that it is useless to argue it. As I said before, I wish merely to recall these facts to your recollection.

A careful examination of the nasal spaces will in many of your cases of headache and neuralgia only confirm these facts, and often too when the patients repudiate any suggestion of nasal trouble. Every one who has ever had cold in the head knows he can have both headache and neuralgia as an accompaniment or result of the nasal obstruction. These pains in the forehead and face are the reflex effects of the direct pressure and irritation of terminal branches of the trigeminus through its ganglionic connections. For example, it is a common experience for a patient to complain of frontal headache and pain in the upper teeth as the almost immediate effect of an application of chromic acid to the middle turbinate, even under cocaine anæsthesia, and sometimes as a result of merely touching the turbinate with a probe. In the same way a very small point of irritation in the nose or naso-pharynx, from hypertrophies, spurs, adhesions, etc., could bring about reflex pain in the head and face either intermittent or constant; and these pathological formations can exist in the nose without any obstruction and without any other local symptoms to call the patient's attention to them. Hence often the disclaimer of any nasal trouble. But many are fully conscious of nasal trouble manifested by imperfect breathing, the occasional or continual obstruction of one or the other nostril, or a discharge from the nose, or a constant desire to clear the throat. Examination may reveal the presence of adenoid tissue at the roof of the naso-pharynx, or thickenings of the nasal tissues, causing contact or pres-

sure in the nostrils. Adenoids and nasal obstruction of any kind have been shown to be a fruitful source of headache and neuralgias. I do not mean to say that all people who have such nasal changes have headache or neuralgia. This would be as far from correct as to state that all people with refractive or muscular eye troubles have headache. In neither case would it be true. But I say of people who suffer from headache and facial neuralgia a very large number will find the source of irritation in the eye, or in the nose and naso-pharynx. Why some people suffer from reflex manifestations and others do not from the same causation is not easy to explain. Theoretically, we may conclude that it is due to the difference in the condition of the reflex centres which in the one case are for some reason below par and incapable of resisting the influence of peripheral irritation; and in the other being absolutely normal and not susceptible to the same influence. Constitutional causes which lower the resistance of nerve centres, such as malarial and rheumatic changes, imperfect digestive apparatus, excess of uric acid, etc., may undoubtedly help to keep up the malign influence, but after the train of symptoms has once started, the source of local or peripheral irritation must be done away with before constitutional treatment avails.

As already stated, when there is trouble with the eyes, the error must be corrected by the proper adaptation of glasses, by prismatic exercises or by surgical operations to adjust the muscle balance.

When the causation is presumably in the nose or naso-pharynx, we must look for the pathological alteration that is the starting point of the irritation. If adenoids are present, they should be curetted; if simple hypertrophy of the turbinates, it can be reduced by applications of acid (chromic or glacial acetic) although sometimes it is necessary to remove it with the snare. The most troublesome cases are those with dense hypertrophy of the middle turbinate, resulting in pressure on the septum and frequently adhesions, usually of an osseous character, between them. These adhesions must be done away with either by means of the saw, drill, cutting forceps or otherwise and the enlarged turbinate removed. Blenorrhœa of the ethmoid spaces is often an attendant complication and adds to the difficulties. The treatment is consequently tedious, but is often satisfactory, even in these worse cases, and eminently so in the simpler ones.

In addition to the local treatment, both topical and surgical, we must attend to any existing dyscrasia or constitutional disturbances, whether of the digestive or circulatory apparatus, and especially correct any tendency to lithæmia, by regulation of the diet and appropriate remedies.

This regulation of the diet and habits, as well as the choice of remedies, whilst differing according to individual traits in each case, should be directed to strengthening the *reflex centres*, and thus not only confirm the immediate result achieved by the local treatment, but to keep up this good effect and prevent relapses by the improvement of their powers of resistance.

200 E. Franklin St.

DISCUSSION.

Dr. C. W. Kollock.—The time is drawing near for us to close, but I don't like to let a good paper like that pass without saying something. Dr. White, of course, has treated it very thoroughly, and is right in saying it is this irritation in refraction which causes the greatest trouble. Any one who does any eye work will bear him out in this. The reason is that these people who have the slight error in refraction go on attending to their usual business and never let the eye rest. In those cases in which the error of refraction is greater, where cessation from work is impossible, then they should choose some other occupation. Headache that comes from all these cases of refraction, want of balance, etc., are really to my mind the causes of the troubles in breaking up of the health. If a man has a headache he is absolutely unfit to do any kind of work, he can't think, he is disabled for the time being, no matter what may be the cause. I had a young man come to me whose family thought he was losing his mind on account of this complaint of headache. The examination of the eyes revealed the neurosis of the eyes. Glasses were prescribed, and the young man had no more trouble. A lady was sent to me once who had almost every disease in the catalogue of diseases. Her physician had evidently treated her for every thing he could think of, and yet she got no better. He finally thought she had some trouble with her eyes, and the examination proved she had a simple hypertrophy. I treated her for that, and her headaches improved. her appetite improved, and she was finally cured. She had been married at about 35 years of age, and was at that time 37. She had never been pregnant; but a few months after this treatment she became pregnant. I don't mean to say the glasses caused this, but at the same time it was a very satisfactory case. A lady once came to me who was suffering tortures; she couldn't lie down because of the pain on that side of

the face; the pain in the ear was terrible. She couldn't eat because she couldn't chew. It was true she wore false teeth, but these she couldn't wear. I examined the ear and the gums, but could find no cause for the trouble. I must admit that I slipped up here in my examination and didn't examine the nasal cavity. Why I did not do it I don't know, except that I was somewhat dumb-founded at finding nothing the matter with the eye and ear. During the examinations she sniffled once or twice. I said, "You have got a cold." She said, "Oh, I have a little cough." I then found the trouble, and she made a prompt recovery.

Dr. D. A. Kuyk.—Dr. White has fully covered the ground, but I want to report another case of a lady patient whom I treated. This lady had been confined to a dark room for about three weeks and was afraid to go out at night. She came to my place with a heavy shade over her eyes and her face incased in a double veil. Upon testing her eyes I found just the condition which Dr. White so aptly described of astigmatism in the ciliary muscle. The treatment of this entirely relieved her, not at once of the terrible sensitiveness to light, but of the accompanying headache. All of you, no doubt, have had similar experiences, but here was that poor creature who had been confined to her room with headache for weeks.

Dr. John Dunn.—There are two points in Dr. White's paper to which I want to refer. In the first place, Dr. White said the impossibility of giving relief by correction of the refractive error in the hyperphoria, the correction of the refractive error may fail to give relief, but at the same time it gives such a clearing to vision that the demand for accurate single vision is imperative, and thus it often happens that the correction of a refractive error makes the patient suffer more, provided the muscular errors be left unrelieved, will make the patient suffer more than he did when he wore no glasses at all. This is a very important point, and it is one that often causes the general practitioner a good deal of criticism on the part of the oculist who gives the correct glasses for the refractive error but fails to correct because of the patient's unwillingness to be treated for muscular error. Another point is that not all refractive errors need glasses. The general condition of the patient has a good deal to do with the necessity for wearing glasses. This is often seen for instance after an attack of fever when to accommodate the eyes is made with a great deal of effort, and where the use of the eyes is very painful for a considerable number of weeks. Not only so, but in cases of uterine trouble. The use of appropriate glasses will not give relief in a great many cases as long as the uterine trouble is left untreated.

Dr. White.—I have nothing further to say except that I am very much obliged to these gentlemen for confirming the statements in my paper. I have only to add that if we could get such results as Dr. Kollock obtained in one of the cases he mentioned, the opthalmologist would be in greater demand than the gynæcologist, as the latter sees a large number of such patients, and if the adaptation of glasses would accomplish what even the local treatment fails to do, the gynæcologist would be out of a job.

Dr. W. S. Davidson.—I would like to mention a case that I had sometime ago, of a young lady about sixteen years old who had eye trouble and throat trouble, and I sent her to one of the best doctors, I thought. He fitted glasses on her and everything was wrong, they didn't suit. But after awhile she had ear trouble, too. After putting on some bichloride it was all right, and I remark from what one of the gentlemen said, I think it proved something else was wrong beforehand.

What Medicine Owes to Bacteriology.†

By E. C. Levy, M. D., Richmond, Va., Professor of Histology, Pathology, and Bacteriology, Medical College of Virginia; President of the Richmond Academy of Medicine and Surgery.

Only the true devotees of science—and these have been conspicuous by their scarcity in all times—are so inthralled by the love of knowledge for its own sake as to ask of their mistress naught but that she shall lead them, even over rough and thorny ways, into new paths of knowledge and over higher realms of wisdom. Most men, especially in this utilitarian age, view each new discovery of science from the standpoint of its usefulness and see naught desirable in the most glorious achievements of the human intellect when these do not at once result in some practical application, some immediate benefit to themselves or to mankind at large. If it must be admitted that the rank and file of our own profession belong to this latter class, it must also be granted that there is nothing derogatory in the admission. The function of the physician is to heal the sick, and to this end must

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be turned all his energies, all that is strongest and highest and noblest in his mentality. Having throughout life to deal with the concrete problems of human suffering, small wonder that he finds no time to wander into the alluring by-ways of abstract science or that he greets with a chilling "*cui bono*" each announcement of the enthusiastic worker in some sister science.

Now that the hopelessness of refuting the facts of bacteriologic science has been demonstrated, it is still common to hear many who formerly contested all the claims of bacteriology falling back on the statement that, admitting the teachings of this science, yet these are after all of no practical interest to the medical profession, and that however much light may have been thrown upon the etiology and pathology of many diseases yet the vastly more important point of curing these conditions has not been materially advanced. I have, therefore, selected the subject of this paper with the idea of indicating, in such manner as can be done within the limits assigned, the practical services which bacteriology has rendered to the science of medicine.

Unquestionably foremost among these services stands the fact that to bacteriologic teachings were due the development of antiseptic surgery, whose introduction revolutionized the chirurgic art, opening up at once new possibilities and enabling the surgeon without fear to enter regions whose invasion was previously not to be thought of; removing all mystery associated with suppuration, surgical fever, erysipelas, and hospital gangrene; and making every surgical operation far more than a mere mechanical problem whose solution meant a few minutes (the fewer, the better) of cutting and coaptation. But the history of antiseptic surgery is too familiar to every physician to justify the enlarging upon this topic in spite of the wealth of material it offers in maintaining the point under discussion. Let those, however, who are inclined to oppose the idea that bacteriology has contributed much of practical value to our art reflect on the triumphs of antiseptic surgery ere they attempt to belittle the science to which it owes its origin.

Right here such opponents may reply that the doctrines of Lister were formulated at a time when but few facts in bacteriology were known and when it laid no claim to being a science. Admitting, they will say, that the most brilliant triumph of bacteriology was the outcome of such imperfect knowledge, then the further growth of the science should have led to even more striking developments of usefulness if the subject is indeed as important as is claimed.

At first glance this argument might seem not without justice, but such remarks, more closely investigated, show an ignoring of the course of development of almost every discovery which has ever been made in any line. It is the rule, rather than the exception, that the announcement of some entirely new principle leads almost at once to practical results of a more radical nature than those arising from subsequent patient and laborious investigations of the subject. The invention of movable types was a greater advance from the previous time-consuming and unsatisfactory methods of preserving the thoughts of living genius than have been all subsequent achievements of typographic art. Great as has been the advance from the original hand-press to the massive and wonderful mechanical devices of the present day, which print, fold, and paste thousands of copies an hour, yet we justly recognize the revolutionary effect of the art of printing upon human progress as dating from the fifteenth century when the principle was discovered, and we regard all subsequent developments in this art as differing in degree only from those of that day.

From a scientific point of view nothing could be more radical than the recent discovery of X-rays, for it brought to light a form of energy previously unheard of, yet within a few months after the announcement of this discovery about all that was essential in its application had been worked out, and it is not unsafe to say that, however much certain minor details may be subsequently elaborated, yet none of these results will equal in brilliancy those which were almost at once attained.

Hence, when we admit that no application of bacteriology has exceeded in practical results the introduction of antiseptic surgery, we are but illustrating the common course of new discoveries. In this very instance, too, the parallel may be carried further. Just as in the cases above cited, while nothing as radical as the first principles of antiseptic surgery has since been introduced, yet the perfecting of technic has gone on, and many cumbersome, useless, and even injurious details of the original method have been supplanted by the more modern practices of its successor, aseptic surgery. The conception that the air, and possibly the tissues of the patient himself, teemed with germs of suppuration seemed to require the use of antiseptic sprays in the operating-room and the application of powerfully germicidal irritations over the field of operation in every case. Now it is known that the air is a source of danger which may commonly be ignored and that

normal internal organs are free from bacteria, while the actual sources of possible infection are recognized in the integument of the patient, in the hands of the surgeon or his assistants, and in instruments and dressings. These are subjected to such disinfecting processes as are suitable for each, and the increased ease of operating and the greater readiness with which the healing process occurs in tissues which have not been subjected to the prolonged macerating and irritating action of powerful antiseptics, are secondary triumphs which, while not so radical an advance over former methods as was the original introduction of Listerism, are yet to be regarded as essential improvements over that method. It may be pointed out that the technic of modern asepticism is the outcome of painstaking bacteriologic investigations.

After this cursory view of the debt which our profession owes bacteriology on the surgical account, let us take up the contributions of this science to internal medicine. Here, there is no one thing which is seemingly as brilliant as the records of antiseptic and aseptic surgery, for the benefits, though in the aggregate at least equal to those conferred upon surgery, are scattered and must be considered individually.

To account for this difference is not difficult. Accepting the common division of medical treatment into preventive and curative, and contrasting these with the principal of aseptic surgery, we see how infinitely more difficult are the conditions met with in the medical than in the surgical class. To perform an aseptic operation requires only that we shall for a brief space of time exclude the entrance of bacteria to a limited exposed area—conditions not so trying when once their nature is understood. On the other hand, preventive medicine, so far as bacterial diseases are concerned, demands continuous effective opposition to the entrance of widely-distributed pathogenic organisms to any part of the system, and curative treatment, as applied to the same class of cases, involves the destruction of these germs, or the neutralization of their toxic products, after the citadel has been invaded. Let us now see what has been done towards meeting these exacting requirements.

In the line of preventive medicine not only have there been introduced methods of widespread usefulness in checking the invasion of certain diseases whose origin and mode of transmission have become known through bacteriologic investigation, but these methods have also been applied with much success to that large class of cases which, while clearly of an infectious nature, are still of doubtful etiology.

In combating the spread of that great modern scourge, tuberculosis, the sanitarian has encountered at every step the most violent opposition on the part of the very ones whom he has sought to benefit, and his failure to accomplish even more striking results when those which have actually been attained must be attributed not to lack of knowledge but to failure to secure the support of popular sentiment. The lines along which he has for the most part been forced to confine his attention are in the direction of the prevention of the transmission of the disease from animal to man, and he has been allowed to do but little in checking the direct transmission from man to man. Dairy, meat and herd inspection are now recognized functions of boards of health in many states and cities, and to bacteriology is due not only the introduction of these protective measures but also the methods by which they are carried out. While the above-mentioned measures are directed against a mode of transmission far less important than that which in most communities is but little considered, still they are far better that the entire ignoring of every means of prevention of the spread of the disease. In some cities rigid regulations have been enacted as to spitting in public conveyances and places of assembly, but all attempts to introduce any sort of legal control over the mode of living of the victims of tuberculosis have thus far encountered too violent opposition to admit of their being carried into effect. It is to the education of the public itself that we must look for the adoption of the proper measures of protection. When the infectious nature of tuberculosis shall have become more generally understood, popular sentiment will itself enforce what at the present time scientific appeal is powerless to effect.

In diphtheria bacteriology not only enables the physician to decide promptly and positively the nature of suspected cases, but it also furnishes him with an absolutely trustworthy guide as to the length of time that it is necessary to isolate any given case after apparent recovery, thus at both ends of the disease lessening the danger of a single case transmitting the disease to others of the household or even throughout an entire community.

In typhoid fever the recognition of the fact that the feces contain the *materies morbi* of the disease has led to preventive measures in the disinfection of the stools of typhoid patients, and to guarding against contamination of the water supply. Where there is reason to suspect that such con-

tamination has actually occurred, it is a lessen learned from bacteriology that such water should be boiled before drinking. In many communities the introduction of city filters has been uniformly followed by a diminution in the annual number of cases of typhoid fever.

The effective disinfection of appartments after occupancy by contagious cases is another hygienic measure whose technic has been perfected through bacteriologic teachings.

This by no means ends the account of what preventive medicine owes to bacteriology, but an outline of the debt in other directions now demands consideration, which must here be of an equal cursory character.

Coming to the question of the curative measures which internal medicine owes to bacteriology, we find the use of antitoxins as the most important contribution. Up to the present time the only common disease of this country in the cure of which an antitoxin has proved of very great value is diphtheria. Antitoxic serum is now generally recognized as the most valuable agent in the treatment of this disease. Statistics of the most extended nature conclusively prove this, but even more convincing is the personal testimony of the thousands of physicians who have employed the remedy. It is very common to hear the statement made by practitioners of ability that they now approach the treatment of this dread malady of childhood with a confidence unknown in former years or, at any rate, without that overpowering sense of helplessness which they formely felt.

The opposition to diphtheria antitoxin comes, for the most part, from those who have never employed the remedy, or who, using it, have utterly ignored all the recognized rules and expected it to accomplish the impossible. It has never been claimed that antitoxin could restore the integrity of organs whose cells have become profoundly affected before the remedy is given, yet it is still no uncommon thing to witness its exhibition late in the course of the disease by men who have never learned that the remedy is to be given as soon as the diagnosis is made and not as a last resort. It is needless to point out that not only is antitoxin the result of bacteriologic study, but that its production is entirely dependent upon that science.

In the treatment of tetanus, antitoxin has not yet been as successful as in diphtheria, although laboratory experiments prove it to have even greater power of neutralizing the toxin of that disease than diphtheria antitoxin has over its corresponding toxin. The reason for this discrepancy lies in the fact that when tetanus is first diagnosticated the disease has already progressed to a point corresponding to a late stage of diphtheria —a stage in which, as has been repeatedly pointed out, antitoxin is well-nigh powerless. Recently much light has been thrown on this point, and a mode of employing tetanus antitoxin has been suggested which will perhaps render its use of service in otherwise hopeless cases. It has been demonstrated that the cells of the central nervous system possesses a special affinity for the toxin of tetanus, and that the poison of the disease is thus gradually removed from the general circulation and fixed in the cells of the brain and spinal cord, where its effects are exerted. This offers a rational explanation not only of the special symptoms present in tetanus infection but also of ineffectiveness of subcutaneous injections of antitoxin after such a combination has occurred—the antitoxin not coming into sufficiently direct contact with the toxin which is fixed in the cells of the central nervous system.

Following out this idea, Roux and Borrel, within the past year, have suggested the advisability of injecting tetanus antitoxin directly into the brain of the patient, where it is at once brought into intimate relation with the combined toxin. Their experiments upon guinea-pigs have shown that by this method the lives of infected animals can be saved at a stage where mere subcutaneous injections of the antitoxin are without effect. Already this method has been applied to the human subject in twelve cases, nine in Europe and three in this country.* Of these cases five recovered and seven died. Most of the fatal cases were either of a character so profound that not even under the anesthetic used during the operation did the muscular spasm disappear, or else the patient died from complications not directly due to the tetanus infection. When it is remembered that in all of these cases the treatment was undertaken as a last resort, after it appeared that death would otherwise certainly occur, a recovery rate of 42 per cent. is to be regarded as exceedingly encouraging.

Regarding the use of anti-streptococcic serum, reports have been most contradictory. It seems as if the remedy will prove of value under certain conditions. The product is as yet not satisfactory, it being especially prone to lose its power with age, and the virulence of the streptococci from which it is manufactured is so variable that

*George G. Rambaud, N. Y. Med. Jour., lxviii, 25, p. 884.

experiments made with any given specimen cannot usually be reproduced with the next.

In the treatment of bubonic plauge much more satisfactory results have been attained by serotherapy than we would have been led to expect from the usual rapid course of the disease.

While, then, practical results with antitoxic serums, so far as the common diseases of this country are concerned, are as yet limited mostly to their employment in diphtheria, still the discovery of the underlying principles involved may be regarded as a most brilliant triumph, and there is no doubt in the minds of those who are in touch with bacteriologic progress that little by little these principles will be elaborated until the system is perfected.

The use of protective vaccines against several diseases has already been attended with satisfactory results and promises much for the future. It is beyond the scope of this paper to go into details on this subject.

The treatment of inoperable cases of sarcoma, especially of the spindle-cell variety, with Coley's streptococcus and prodigiosus toxins, while not by any means uniformly successful and also attended by many drawbacks, has yet been shown to offer at least some chance of recovery to a class of cases otherwise certainly doomed to speedy death.

In that rather rare but justly dreaded disease, hydrophobia, the treatment by Pasteur is now recognized as the most valuable procedure at the disposal of the physician. While this does not strictly fall under the head of bacteriology, since the germ of the disease is as yet unknown, still we have every reason for believing, from analogy, that bacteria, or allied micro-organisms, are the etiologic factor, and the methods employed in the manufacture of the virus are similar to those of bacteriologic technic.

The important rôle of antiseptics internally employed is the direct outcome of the teachings of bacteriology. No substance has yet been discovered which will effectually destroy germs which have once gained entrance to the human organism without at the same time being directly poisonous to the host, but the restraining, or antiseptic, influence of many substances is constantly taken advantage of by the physician, especially in conditions of fermentation occurring in the digestive tract. With the systematic investigation on the part of bacteriologists of each new compound elaborated by the chemist, it is entirely possible that the combined effects of these two classes of scientists may yet result in the discovery of an ideal internal antiseptic and germicidal agent.

Up to this point this paper has dealt with only such practical points in bacteriology as have directly contributed to the saving of human life either through surgery, preventive medicine or therapeutices. Brief notice must now be taken of two indirect methods by which our power as physicians has been extended through bacteriologic teachings; for without recognition of these our sense of obligation to this science would be by no means complete.

In the diagnosis of many diseases bacteriology offers the only opportunity for prompt recognition at a sufficiently early period for our therapeutic means to be capable of exerting their full effect. In other conditions many obscure points can be cleared up by this mode of investigation—a service whose importance is only now becoming generally recognized and whose possibilities are far from fully developed.

Finally must be mentioned the insight into the pathology of disease in general which has been gained through bacteriology, a point little appreciated by the general practitioner. Valuable as were the lessons of the post-mortem table before the days of bacteriologic science, yet, after all, necropsies do but show the lesions of disease after they have gone on to the point of fatal issue, except in so far as their earlier stages may at times be studied in intercurrent affections. In the latter case, however, it is a composite and not a simple picture which is offered for inspection. Furthermore, light is but seldom thrown by human autopsis upon the course of disease ending in recovery. By means of animal experiments, conducted with either living bacteria or their toxins, the entire course of many diseases can be studied in detail from the time of their incipience to the point of death or recovery. Such important facts have been learned as that a pure tuberculous infection of the lungs does not give rise to cavity formation, but that this occurs through superadded infection by the streptococcus pyogenes or other micro-organisms; that the normal secretion of the peritoneum and other mucous and serous membranes possesses decided germicidal powers; that the same bacteria may give rise to a variety of affections under conditions as yet not understood; that fatigue, cold, insufficient food, vitiated atmosphere predispose to many infections—and so the list might be prolonged for many pages.

In bringing this paper to a close, I realize how impertectly the subject has been handled. I have merely sought to outline the service of bacteriology to medicine rather than to deal with any one of these exhaustively, for no one division of the subject could be

satisfactorily dealt with in a paper of this length. That physician must be ungrateful indeed who fails to accord due credit to a science which has given him antiseptic and aseptic surgery, has made preventive medicine almost an exact science, has furnished him with the means of combating a most fatal disease and of alleviating many of the symptoms of others, has made easy the diagnosis of many important diseases and has contributed to our understanding of a class of cases whose study had previously been highly unsatisfactory.

Dystocia.†

By David A. Stanton, M. D., High Point, N. C.

The only excuse which I can offer for presenting this old subject is its importance, and that it needs no far-fetched ideas or fine spun theories to cause us to appreciate the significance of difficult labor.

Once in the lying-in room where we know it is impossible for dame nature to take proper care of a faithful wife and the life of an unborn babe, we can ever afterwards appreciate the subject of dystocia.

To help both safely and comfortably as we can to a successful termination of the crisis makes a home unmeasureably happy and raises our profession in the eyes of all. To do this we should be thoroughly familiar with all forms of difficult labor.from the simplest uterine inertia requiring only a dose of quinine or a hypodermic injection of strychnine nitrate to the severest case of contracted pelvis necessitating a Cesarean section or symphysiotomy.

Uterine inertia due to other causes than malformations, the most frequent source of dystocia met with and is alike trying to physician and patient. If a person who is objectionable to the patient remains in the room pains will often be inhibited, such a person should be put out, and we should make ourselves agreeable to the patient and her friends. We have all heard it said, the doctor has frightened the pains away. The severity of the pains caused by the uterine contractions will, in some particular cases cause an inhibitory action to be set up and thus render the pains ineffectual, in such instances 15 gr. doses of bromide of potassii, or hydrate of chloral repeated in fifteen or twenty minutes, or a hypodermic injection of morphine and atropine will be of much benefit.

This sedative treatment will do good in primiparæ where the pains become ineffectual from the tiring of the muscles in their first effort to dilate the cervix. After a short period of rest the pains will return with renewed vigor. Should they fail to do so in a reasonable length of time the sedative treatment should be followed with alcohol, quinine or strychnine.

If the os is rigid and unyielding hot water injections against the cervix will do good. But if the labor is delayed by a deformed pelvis the deformity ought to be recognized, and a history of malposition and difficult labors in a woman should arouse our suspicion of a deformed pelvis. It is with shame, though, we admit that ignorance or thoughtlessness along this line has cost the life of many a woman and even more children. And these deformities are not so infrequent but what every active practitioner will meet with some cases during his professional career. The number of deformed pelves is variously estimated at from two to eight per cent. The flat pelvis is, perhaps, found more often than any other deformity, though there are a variety of deformities mentioned in works on obstetrics. It follows, therefore, that an ability to recognize deformities in the female pelvis is a necessary equipment for every practitioner of medicine, who may be called upon to attend women in confinement, and a knowledge of pelvimetry is as essential to the intelligent and successful practice of obstetrics as are percussion and auscultation to the practice of medicine.

The following case was given me by a brother physician, which goes to prove th force of the above remark :

Dr. A. was called by Dr. B. to assist in a shoulder presentation. The condition of the patient was good and the fœtal sound could be distinctly heard and was regular. The membranes had ruptured sixteen hours before the consultant arrived. However, in their desire to relieve their patient they forgot that the woman had a pelvis and at once did a podalic version, consuming one and a half hours in getting the after coming head through the pelvis. During this experience they had plenty of time to remember that deformed pelvis exist outside of text-books. The child was, of course, dead, and it was useless to consider Cesarian section. They kept on with forceps to the head and blunt hook in the mouth, and finally delivered a dead baby, another victim to the flat pelvis, and I might add, thoughtlessness also, for I am sure a Symphysiotomy or a Cesarian section done in time would have saved both mother and child ; as it was, both were lost.

A pelvimeter should be in our obstetrical bag. But where one is not at hand we should, in doubtful cases, measure the conjugate with the index and middle finger of the right hand held stiffly. Pass them up to the promitory of the sacrum.

let the thumb slide upon the mons-veneris and make pressure until we plainly feel the impress of the arcuate ligament under the lower edge of the symphysis. With the finger nail of the other hand a mark is made at this point, withdraw the hand and the distance from this point to tip of middle finger will be the diagonal conjugate—subtract $2\frac{3}{4}$ centimeters and the remainder is the true conjugate. When the true conjugate is not more than $9\frac{1}{2}$ centimeters ($3\frac{1}{2}$ inches) there is almost sure to be trouble with a normal sized head and forceps or premature labor will have to be resorted to. When the conjugate is as low as 8 c. (3 inches) premature labor is indicated. A conjugate of from $7\frac{1}{2}$ to 7 to 6 c., requires premature labor with Cesarian section four weeks before term.

If the patient is not seen until labor has begun, one of the following modes of delivery must be chosen, after waiting to see if the head will engage: Application of forceps, version, symphysiotomy, or Cesarian section. So long as the child is living craniotomy should not be considered. Having measured the pelvis we can more easily decide what to do in the premises. With a conjugate below $6\frac{1}{2}$ c., the woman should go to term and be delivered by Cesarian section.

Labor is obstructed in about 2 per cent. of all cases by some abnormality of the parturiant canal.

The cervix may obstruct labor by reason of atresia, cicatricial contraction, or rigidity, or there may be transverse or longitudinal septa in the canal. Atresia of the cervix in a pregnant woman must, of course be acquired after impregnation. It is, however, rarely complete. Cicatricial contraction of the cervix may generally be overcome by hydrostatic dilators. Congenital narrowness of the vagina or vulva is, as a rule, overcome by the advance of the presenting part, though often at the expense of vaginal or perineal laceration. Hydrostatic dilators will help wonderfully in such cases, but in some instances it may be necessary to resort to incision.

Carcinoma of the cervix will in nearly 50 per cent. of the cases interrupt gestation at various stages. When they do go to term some may be delivered spontaneously, though this is not the rule. Cesarian section is commonly the proper treatment for these cases and should be selected if there is good reason to doubt the possibility of spontaneous or artificially aided labor.

Fibroids of the uterus and cervix low enough in situation to become incarcerated in the pelvis are likely to cause insuperable obstruction, besides favoring abnormal positions of the childs head. If attempts under anesthesia to dislodge the tumor and push it above the pelvic brim fails, a Porro-Cesarian operation should be performed, even though the tumor is not of such size as absolutely to prevent the delivery of the child, because on account of its low vitality the pressure to which it would be subjected by drawing the child past it would cause it to slough and probably cause a fatal infection. Obstruction in labor, on the part of the fœtus occurs in about 6 per cent. of women, when due to over-growth. Pregnancy may be expected to be prolonged beyond the three hundredth day, and every day the fœtus remains in the womb beyond the usual time some little increase may be expected. It is a safe rule to allow no women to exceed the normal duration of pregnancy more than three weeks.

The various double monstrocities, hydrocephalics, prematurely ossified heads, and tumors of the fœtus, cannot be treated by a single rule, but each case requires management peculiar to itself.

Shoulder presentations, occurring once in 260 confinements, has an estimated maternal mortality of 11 per cent.—one-half of the children perish. I mention the treatment only to insist upon an endeavor being made early before the membranes are ruptured to bring the head or breech through the os, and it ought to generally succeed by combined external and internal methods. The introduction of the entire hand ought to be reserved for cases where the waters have been long drained away when first seen.

With prolapsed cord many children perish, but I have not found it so difficult to replace. In August, 1897, was called to see a negro woman in labor and found the funis prolapsed into the vagina, waters had escaped about fifteen minutes before I arrived, the pains were vigorous and head engaging. Gave chloroform and pushed the cord well up beyond the head, stopped the anesthetic and with my hands made strong pressure over uterus and held the head firmly against the brim of the pelvis until the pains caused the head to engage. Labor then proceeded without further trouble.

Face presentation may give rise to much trouble when the child fails to rotate to the front though it seldom fails to thus rotate and requires little more attention than a vertix presentation but should it fail to rotate direction may be given with the blade of a forcep or the hand inserted so as to make pressure on the posterior cheek. If this fails both blades of the forceps may be applied to the head and a considerable amount of

force used in trying to rotate the head, though this is dangerous to the child. If the child be small and the pelvis large, it may be delivered in the mento-posterior position. Finally, if all these measures fail there is no resource left except craneotomy.

I have not seen anywhere a neck presentation recorded; however, I have seen one case in consultation. In September, 1896, I was sent for by Dr. Tomlinson to assist him in delivering Mrs. J., at Archdale. On enquiry I learned she was seven months advanced, and had been in labor twelve hours. For six hours there had been no descent of the child. Examination revealed the presenting part tightly wedged into the pelvis. Under complete anesthesia it was impossible to force the child back or to pass the hand beyond the presenting part to change its position. Palpation showed the child to be lying with its abdomen to the mother's, head flexed back between its shoulders. After considerable effort a cord was passed around the neck and by strong traction enough space was secured to decapitate the head with a blunt pointed bistory. The body was easily delivered, as was also the after coming head.

In most cases the management of twins does not differ from that of ordinary labor. But the degree to which the uterus is distended may cause some inertia in the first stage of labor, and after the first child is born, it will facilitate matters to rupture the membranes and let the waters drain away. If labor pains do not return in fifteen minutes after the first child is born, try to induce them by friction over the uterus, and a dose of ergot may be given. Occasionally serious difficulty arises from parts of both fœtus presenting simultaneously, thus impeeding the entrance of either child into the pelvis, or they may get locked together so as to render delivery impossible without artificial aid. It may be far from easy to discover the cause of the obstruction, as a case in my practice verified some years ago, when the heads both presented. When first seen there was no mistake as regarding what was felt on examination. It was the head in the R. O. A. position. I waited six hours expecting the labor to terminate any hour, as there was good dilatation and pains vigorous. During these hours of anxious waiting there was no descent of the head Dilatation being sufficient I applied the forceps, but was astonished at the force necessary to dislodge the head and bring it to the perineum, though finally succeeded and delivered twins, both head presentation. In this instance it was impossible to tell where or what the obstruction was, except a conjecture, that there were twins in utero. I now believe the second child's head was engaged against the chest of the first.

When both heads present at the brim it will generally be possible to get one out of the way by appropriate manipulation, internal and external, and application of forceps to the other; but if both heads are allowed to enter the pelvis the difficulty will be grave.

DISCUSSION.

Dr. J. W. Long.—I don't think there has been a more practical or interesting paper brought before this Society than Dr. Stanton's. It is one of absorbing interest from the fact that it concerns us all, for we all see cases of dystocia, unless, perhaps it be some of our distinguished friends who limit their work to fitting glasses, and those who confine themselves to looking through the microscope and hunting bugs; but for those of us who see obstetric cases it is a very interesting subject. While Dr. Stanton was reading his paper, and when he mentioned a case of dystocia due to the presence of solid tumor in the pelvis, I recalled a case which I had the pleasure of seeing with Dr. Stanton a number of years ago—I think in 1893—of a woman who was about three months pregnant, and whose pelvis was completely choked by fibroid tumors. The condition was such that it was clearly impossible for the woman to be delivered, so it was thought best to do a hysterectomy, in other words, to do a Porro operation. Dr. Stanton and his associate, Dr. Cox, and myself, proceeded to operate at once, removing the entire mass of tumors and uterus with its contained gestation. The primary object was to relieve this woman from the dangers to which she would be subjected in childbirth. The abdomen was closed without draining, the pedicle being dropped, and so far as I have been able to discover it was the first operation ever done by that method in America, and probably the second in the world for that particular condition and by that particular method.

I recall a case of dystosia that came under my observation about a year ago. A lady living in the western part of the State came to me with a tumor of considerable size. She gave a history of having had great difficulty in her last three confinements. She was the mother of five children, possibly six. On examination I found that she was three and a half months pregnant; that the uterus was pushed far upwards and a little to the left, lying under the ribs in the position of the spleen. The pelvis and the lower half of the abdomen was filled with a fluctuating tumor. We

advised her to have this tumor removed, as it was clearly impossible for her to be delivered in the natural way with this tumor present. With the assistance of my associate, Dr. Whitehead, and Drs. McKenzie, Dorset, and H. F. Long of Statesville, I opened the abdomen about a month after that, time and attempted to remove the tumor. I found it was an intra-ligamentous dermoid. The walls of the cyst were so exceedingly fragile that it was impossible under the circumstances to peel out the entire tumor, so I did what I conceived to be the best thing under the circumstances, which was to make an incision in the posterior fornix of the vagina and drain the tumor in that way. Later she returned to our town and was delivered in my absence by my associate, Dr. Whitehead. Now, this was a case in which the woman's life and the child's life would have been sacrificed if she had come to term unless she had had a Cesarian section. I have now in our hospital at Salisbury a lady whom I delivered last August and whom I saw for the first time during her confinement. I made a vaginal examination and found she had a tumor, probably not larger than an orange, though I was unable to clearly define the limitations of the mass. She was in the first stage and the presentation high. The tumor was caught between the head and the basin of the pelvis. By pushing the tumor back, and by dint of a great deal of effort on her part and encouragement on my part, we managed by an all night "seance" to get the baby through. By my advice she has come to the hospital to have this tumor removed, feeling sure that if it should increase in size it would be almost impossible to deliver her in case of a subsequent pregnancy. [Later: On Jan. 23d I removed from this woman an ovarian dermoid twice the size of a large orange and containing hair, bone, teeth, and sebacious matter.] The lesson which I would glean from these cases I have reported as bearing upon the subject which Dr. Stanton has so ably presented to us, is that in some cases of dystocia we must take time by the forelock and remove the difficulty before the woman comes to labor.

Dr. J. C. Walton.—I have enjoyed very much Dr. Stanton's most valuable paper, and in this connection I want briefly to report a case that I recently saw of prolapsus of the uterus. The uterus was outside—about one-third or one-half of the uterus. The woman had been having hard pains all day, ineffectual pains, and by dilating with the hand and the use of the forceps we succeeded, after a great deal of difficulty, in removing the child. In this case the uterus was pushed out, and we had a great deal of trouble on that account, but got her through all right. This was the first case of prolapsus of the uterus I ever had in my experience, and is a rare complication.

Dr. Geo. Ben. Johnston.—I have listened with a great deal of interest to Dr. Stanton's paper, and whereas I am not an obstetrician, I am in an allied branch, and would like to make mention of a case which was very similar to the first case Dr. Long reported. The case was referred to me by Dr. Dayton of this State. The woman was forty years of age, mother of seven children, and had gone six years without any pregnancy. Having become pregnant again and suffering great pelvic pain, she was examined by her doctor and a tumor of the uterus was discovered. Indeed the pelvis was so choked he deemed a natural delivery impossible. He referred the case to me for treatment, and upon examination and the history of the case gave the probable diagnosis of uterine fibroid complicated by pregnancy, having advanced to the four and a half month. Examination showed a tumor nearly filling the pelvis, so completely including the vagina as to make it impossible to reach the cervix by the examining finger. This tumor was attached to the anterior portion of the uterus, about the junction of the cervix with the body. It made an extremely disagreeable and painful impression upon the bladder. The patient's condition was not favorable, she was wasted and weak, but it was deemed advisable to perform an immediate operation upon the hypothesis that she could not be delivered by the natural medium; that in all likelihood she could not go to term to be subjected to a Cesarian section for the rescue of the child; that abortion would take place which would be so complicated by the tumor, that death would likely ensue. The operation was performed without a great deal of difficulty except the danger incident to wound of the bladder owing to the location of the tumor. When the tumor was removed we discovered that it was the size of a small cocoanut, that the uterus was conical in shape, and when the uterus was opened it was discovered that its walls were of uneven thickness. The wall at its right horn was so thin that it would give the impression that the pregnancy might have been an interstitial one. So that after opening this specimen I was more than ever convinced that the operation was a proper one because I believe that if an attempt at abortion had been made, that the uterine contraction might have ruptured and probably would have ruptured the uterus at this point.

which would have complicated an already complicated case. The woman made an excellent recovery without any untoward symptoms whatever. My mind was easier made up as to what should be done in this case, having had the advantage of previous conversation with Dr. Long during the time that he operated upon and reported the case to which he alluded, which at that time was a unique case and which represented one of the very few cases reported in medical literature.

Dr. J. K. Parrott.—Dr. Stanton's paper was of especial interest to me, and I listened to the discussion by Dr. Johnson and Dr. Long with much pleasure. It was of especial interest to me, because about eighteen months ago I was called in consultation to see a case of labor in which we found the pelvis was so much choked up by a mass that I recommended a Cesarian section which was done at once, before the woman was exhausted. We removed the child, removed the placenta, and closed the wound in the uterus, which by the way we made transversely instead of longitudinally, by three layers of sutures. We closed the abdominal wound. The woman recovered and the child and mother are still living. I made at the time an ovarian section so as to prevent the future pregnancy of the woman. I took that to be the proper thing to do under the circumstances. I found at the time of the operation it was more convenient to do by lifting out of the abdominal cavity the pregnant uterus and to compress the uterus just at the cervical junction instead of using the ligature as is often the case. I found I could steady it better, as I made the incision and afterwards as I closed it.

Dr. Hugh T. Nelson.—In this connection I would like to report two or three cases that I have never seen any notice of in any of the journals and I have never seen any obstetricians who have had the misfortune to have such cases. In two of these cases there was complete rupture of the vagina following shoulder and arm presentation. In the first of these cases there had evidenty been an attempt at version and the physician who saw the case had thought there existed a twin pregnancy, and I was sent for to help. I entirely failed in my effort at version. The physician who came in, said he was pretty confident that he could do a version. He did so and was very much surprised to find that the child disappeared entirely from the field of operation, but the delivery was easily accomplished. The patient was found to be in profound shock, and died that night. I went up the next day and made a post mortem examination and found that there had been an extensive tear of the vagina just at the vaginal junction. The next case I saw the patient was moribund at the time. The arm was protruding and without any effort on my part at all, simply the slightest pain, the child disappeared well up in the abdominal cavity. The mother was moribund at the time, but I didn't wish her to die, so I extracted the child and made an autopsy as soon as she died, and found exactly the same state of affairs, the difference between the two cases being that the effort of the physician did the rupturing in one and the other was done by natural effort, because in both cases the child was born before the rupture had taken place.

Dr. Hunter McGuire.—I would like to urge a little conservatism about these things. Of course, every case has to be considered by itself, but briefly I would like to mention two cases that are in my hospital, no, three cases, one in another hospital. One a woman, four and a half months pregnant, fibroids were discovered as soon as conception took place and something was necessary to be done. This woman is from Prince Edward county. I opened the abdomen and took out the tumor and left the uterus. In that case there had two weeks passed and the woman had lost her child. The second case I did a similar operation, and that woman is still carrying her child and is ready to go home. I don't mean to say that we should never operate. I mean to say that we ought to have some concern for the baby. We have no right to destroy it if there are other means available. In both these cases the tumors are gone but the uteri are there and in one case the child is still living. I have a woman in the Virginia Hospital upon whom I will operate as soon as I get home, who came last year to the same hospital with large fibroid tumor. I found out that one of the young gentlemen had produced an abortion on that woman, destroyed the baby and sent her home. She has come back this year in the same condition. I don't think we have got a right to let that man continue this operation, killing baby after baby, therefore when I get home I am going to open the abdomen and see if I don't remove that tumor and leave that baby, and in all probability stand a very good chance of saving that baby's life.

Dr. Stanton.—I just wish to thank the gentlemen for the discussion. Dr. Nelson's remarks upon the rupture of the vagina recalled to my mind another accident like those he mentioned. The case was in Dr. Cox's practice. I don't recollect the position of the head, but anyway he had to de-

liver with forceps, and as soon as he delivered the child he found that the vagina was ruptured. It was only a few miles from town and he sent for me to assist in repairing the laceration. The tear was in the left posterior and extended to near the cervix.

Ovaritis—Acute and Chronic.†

By Dr. L. G. Frazier, Youngsville, N. C.

Before going into the diagnosis, pathology and treatment of Ovaritis, Acute and Chronic, perhaps it is necessary first, to give some account of the anatomy and physiology of the gland, For instance, there is perhaps no gland in the body which surpasses the ovary; for though it may not be of very great importance to the life of the individual, yet it, and its functions, may well be said to be the pivot on which our race depends. Even in the individual, though life may be endangered only in a certain class, or a few of the ovarian diseases, yet the frequency of, and the discomfort attending all the others, are enough to exalt the gland into a structure of extreme importance. The ovary and its diseases are generally and too frequently passed unnoticed by the general practitioner.

The human ovary makes its appearance as a blastema on the Wolfian body about the seventh week of extra-uterine life. It has been confirmed by many eminent writers that this early part of its existence being absolutely identical with that of the male testicle, though throughout its after history it has many differences from the male gland, yet it resembles it so much in anatomical structure, physiological purpose and pathological change, I think we are perfectly justifiable in going back to the ancient notion that it is the "testis muliebris." One distinguished writer has drawn a difference between the two glands in that the developing cells of the ovary are plastic or endermic, while the spermatic cells of the testes are epidermic. There are reasons for not confirming this idea, yet we do know that the two are closely analogous even in their diseases. In its development the ovary becomes enclosed in a fold of the peritoneum known as the broad ligament of the uterus. Some writers hold to the view that on the posterior surface of the ovary, the peritoneum does not exist, if so, it has become blended with the underlying coat, the tunica albuginia of after life. The ovaries are situated on a level with the inlet of the true pelvis, behind the fallopian tubes and round ligaments, the left in front of the rectum, and the right in relation to some coil of the small intestine, occupying Douglas' Pouch. The ovaries may vary somewhat in location, they are attached to the uterus by a ligament of contractible tissue derived from the uterus, called the ovarian ligament. They are supplied with blood vessels corresponding in origin to those of the testis; the spermatic and the nerves are derived chiefly from the renal plexus of the sympathetic. The size of the ovaries varies at different stages of life, the age of the individual having a great deal to do with it. At the time of the first menstrual period, the ovaries are considered to be full grown. Ovulation begins at various ages, and usually begins earlier in warm climates than in cold. The function of the ovaries is primary in the process of reproduction. Their physiological action precedes that of the uterus, and continues, as a rule, until the menopause, and sometimes after. By careful observations it has been noted that ovulation and menstruation occur independently of each other, but this is an exception and not the rule. What I mean by ovulation is cell growth of the ovary. Underneath the peritoneal covering of the ovary is a fibrous covering known as the "Tunica albuginia," composed of ordinary fibrous connective tissue, and sending trabeculæ in all directions into the interior of the gland. These cells undergo a peculiar growth, enlarging, coming to the surface, and rupturing simultaneously with the menstrual excitement. Their contents are generally discharged into the uterus by the ducts of these glands. Sometimes this happens independently of the influence of the womb, when, it is said, the contents are lost in the peritoneal cavity.

This peculiar cell growth of the ovaries results in what are known as Graafian vesicles, or the ovisacs of Martin Barry. The Graafian vesicle is nothing more or less than a cell, the product of a gland, of basement membrane, blood vessels and epithelium. The cell bursts, discharges its nucleus as other cells are seen to do, but that nucleus has specific powers, goes through processes under certain circumstances differing in this from all other cells. The gland, therefore, and its cells, have more highly developed and complex functions to perform than any other gland, is more apt to suffer from disturbance, and these special functions being in action during a certain period only of the individual's life, hence we find ovarian diseases, especially adapted to this period, namely, between the years of 13 and 45. I may say just here, however, that this cell

†Read before the Tri-State Medical Society of the Carolinas and Virginia, at Charlotte, N. C., January, 1899.

growth does not cease entirely at the climacteric period. It goes on to some extent as long as there is life, and I may also say there are certain diseases which diminish the activity of this cell growth, between puberty and the climacteric period, such as the wasting diseases—phthisis, cancer, etc. Pregnancy reduces it, also the period of lactation.

The ovary, then, is a simple gland developed as other glands, and formed of similar elements. It is peculiar in that its cell nuclei have special powers during a certain period of life, and this simplification of its physiology, I think, does much towards simplifying its pathology. But perhaps I ought to confine myself more closely to the subject. There is a hyperæmic condition of the ovaries, so closely allied to the forms of inflammation I am to speak of, and most especially the chronic forms, I do not think I would be doing either myself or hearers justice to pass it by unnoticed.

Ovarian hyperæmia is the result of an oversufficient activity of the ovaries and is therefore the converse of ovarian amenorrhœa and dysmenorrhœa; it is by no means a rare affection, it is well marked in its history, the chief signs of which is menorrhagia.

The following is a history of a case I have had under my care. The young lady is the child of parents of markedly nervous temperament, and I might almost say prematurely developed, and when at the early age of 13 years and three months began to menstruate. From the very beginning she passed a great deal of blood at her monthly periods, and at first suffered no pain during the time. She enjoyed excellent health for some time after she began to menstruate, during which time the flow was very profuse, lasting from five to eight days. By the time she was fourteen, her health being impaired, she was listless, sleepy, dull and sluggish, and occasionally would have fainting spells, and became very dull of memory, reduced in flesh and decidedly anæmic. Steady pressure over the ovaries gave great pain, which she said turned her quite sick. This pressure however, was made just two days before her period, and during menstruation this pain was induced by less pressure, but in the entero-menstrual period it could not be produced at all. Her health seemed better during the flow, and that was the reason why her parents did not seek medical aid sooner. In such a case there is no doubt in my mind that there is hyperæmia, not of the ovaries only but of the whole sexual apparatus, due to, it may be, the increased ovarian activity. My experience up to the present, has not as yet been so extensive as to trace such a case throughout its course but I have met with, many cases which I have had sufficient reasons to believe as identically of the same nature in later stages, and I think their menstrual periods are much the same as other women after they have had a child. The marriage life seems to have a great deal to do with rectifying this abnormal excitement of the ovaries. If a patient suffering with abnormal excitement of the ovaries, viz: hyperæmia, remain unmarried, they go on suffering from menorrhagia, become extremely anæmic, the menopause comes on at the usual time, but marked with abnormal profuseness. I have often noticed that marriage, even without result of child-bearing modifies this trouble to a marked degree.

Now just a word, in brief, as to the treatment of the case I have just noted. My first advice was that the patient be taken from school, and that for at least one year, and all instructions, especially in music, should cease, and a change from books and society and indoor amusements, to outdoor exercise and amusements. I then put my patient on tonics to restore the general health.

Just a word as to marrying: One case I had under my charge was permanently cured by marriage, and I believe many a case of hyperæmia of ovaries and menorrhagia have been cured by marriage. I strongly advocate marriage in some cases. Just here I lay special stress on music as being detrimental to young women just emerging into womanhood and beginning to menstruate. To keep a young woman just at this critical period seated upright on a music stool with her back unsupported, practicing vigorously for some hours can only be detrimental to her physical welfare. Musical exercises are hurtful for other reasons, for those who are gifted and are especially fond of music, their emotions seem to be much excited by it. But I must hasten on.

Absolute rest is one of the most essential parts in the early treatment of ovarian hyperæmia. The patient should be confined to a somewhat prone position a few days before, during, and after, the catamenial flow. An application of a counter irritant over the ovarian region just before the flow is beneficial, but the most useful part of the treatment, I think, is the administration of full doses of ergot just before, and duringt, hee flow. The bromides I have found to be of great benefit in ten grain doses twice a day. When hyperæmia is caused by a desire for the opposite sex, as is often the

case, I find the following anaphrodisiac pill given three times a day of great value:

℞ Camphor gr. II.
Ext. Henbane gr. I.
Sig.: Give one or two pills a day.

To relieve the pain I find this pill to be of great benefit:

℞ Ext. Henbane gr. ISS
Opium Pulvis gr. SS
Sig. One pill three times a day.

Just here, let me say, it is very necessary that ovarian hyperæmia be treated in the early stages. This trouble is so often passed unnoticed by the general practitioner and left to nature, that consequently the patient grows worse and worse until she has what we term chronic ovaritis.

ACUTE OVARITIS.

This affection of the ovaries is quite distinct from other ovarian troubles, because, I think, we are almost perfectly justifiable in saying it is always the result of some special cause, usually a specific poison, such as gonorrhœal infection, septic poison in the parturient condition, or some constitutional condition, like the eruptive fevers, and in acute rheumatism. It may also be traumatic, though this is rare.

There is, I suppose, much confusion of thought, as regards the pathology of ovaritis. There is no doubt that ovarian hyperæmia, and acute and chronic ovaritis, are often confounded. Still the causes of each are typical, and the distinction should be readily made. The acute affection, as is well known, runs its course rapidly, and terminates either in death, or subsidence of the inflammatory symptoms and a damaged state of the ovaries. In chronic ovaritis there are, on the contrary, changes which take place more slowly and are not marked by the same symptoms of inflammation. In hyperæmia of the ovaries, of course, we have no tissue change. It seems to me that the differential diagnosis between acute and chronic ovaritis is as well defined, both in clinical history and anatomical changes, as acute and chronic nephritis. Now just a few words as regards the pathology:

When ovaritis is the result of septic poisoning in the parturient condition, only one ovary is affected, as a rule. All the tissues of the ovary are affected and take part in the trouble. This is the first morbid change produced. Then there is swelling of the gland from the transudation of serum. All the tissues are inflamed or involved, frequently the fimbriated extremity of the fallopian tube is involved, and the peritoneum around the ovary. The vesicles are occasionally destroyed by effusion or purulent infiltration. Sometimes one large abscess is formed, in other cases a number of small ones are found. In addition to these pathological changes there are others which may, or may not, occur. Occasionally there are prolapsus of the ovary, and sometimes adhesions to the neighboring organs. When there is a formation of an abscess, and a collection of pus, it may open into the rectum or the peritoneal cavity. Sometimes the abscess does not open at all but remains encysted.

SYMPTOMS.

There are both local and constitutional symptoms in acute ovaritis, occasionally there is a chill or rigor, followed by a decided rise of temperature; there is nausea and vomiting, and acute pain in the region of the ovaries. There is a marked exaggeration of the nervous system, but no delirium. Frequently there is hysteria, and in some cases mania is developed. There is not a vast difference between ovaritis and other acute pelvic inflammations. In the former the nervous symptoms, I think, are more marked, and, in mild cases the constitutional disturbances are less severe. There is a rise in temperature, increased pulse rate, and deranged primary nutrition. The appetite is very poor and some symptoms of dyspepsia, flatulence and constipation. Later on there is a pus formation, followed by a chill or irregular rigors. The local symptom is acute pain, especially over the ovary that is affected, the patient being able often to point out the exact spot where the pain starts. There is marked tendernesss on pressure over the affected ovary. There is generally some tenesmus, a frequent desire to urinate and there is often severe pain on defecation, especially if the left ovary is affected. The physical signs which I deem as of extreme importance in differential diagnosis:

We find extreme tenderness on pressure. In fact I have had patients who would not allow me to make any pressure at all. This pain is more acute, and more definitely located than in pelvic inflammation. When the ovary is very much swollen, as it often is, it can be felt through the abdominal walls. By the vaginal examination, we find the parts very tender and hot. The finger, if possible, should be carried high up behind the uterus, when the ovary may be felt or caught between the finger and sacrum. The ovary will be found to be slightly movable, enlarged and very tender. Rectal examination will perhaps enable us to better locate it.

PROGNOSIS.

We should always expect a fatal ter-

mination when there is suppuration and the abscess opens into the peritoneal cavity. Death may also occur from septicæmia. There are better hopes of the patient when the contents of the abscess finds its way through the rectum or vagina, or when the abscess becomes encysted. The ovary, of course, is impaired, and is no longer capable of performing its normal functions, still, if one ovary is left in a normal state, we can assure our patient that there is a chance of her regaining her health and bearing children.

TREATMENT.

The first and most important is complete rest. We must, if possible, employ such treatment in the beginning as will control or abort the inflammation, and to do this, I find absolute rest, with small doses of opium in combination with extract of henbane, given as often as needed to relieve pain, the best. If the stomach is so irritable as to refuse the opium, then it must be given hypodermically. Some advocate the use of quinine in large doses; in my own experience I have not found it to be of any great value, still I think it may be given without harm and perhaps do good in some cases. If my patient is nervous, as the most of them are, I give bromide and a little chloral at night, or Kola compound. The bowels should be well looked after, and not be kept too long confined, in fact, the bowels should be moved once a day by a mild enema. Local applications, I think, relieve the patient to some extent. I find warm poultices, mild mustard plasters, or flannels wrung out of hot water and covered with oiled silk, give the patient much comfort. The application of leeches is somewhat beneficial. The patient should be well nourished. If there is suppuration and no discharge of pus, and septicæmia is expected, asperation should be done without delay.

Prof. Virgil O. Hardon, of Atlanta, Ga., highly recommends asperation. In my own experience I have not yet found it necessary to asperate. In the beginning of a case of acute ovaritis, I have gotten good results by the administration of hydrastis Canadensis, in 20 minim doses every four and one half hours. The followig formula I have found of special benefit, to allay pain.

℞	Henbane Ext.	
	Camphor aa	gr. x
	Dover's Powder	grs. xx

Mx. ft. Pills no. 10.

Sig. One pill every two or three hours.

CHRONIC OVARITIS.

Concerning chronic inflammation of the ovary, we do not find a great deal in the writings of our authorities in gynæcology, still by careful examinations and grouping of symptoms, I have been able to satisfy myself that the condition may be accurately defined and readily diagnosed, and in my opinion, successfully treated in a great many cases. Chronic ovaritis may be a later stage of hyperæmia, it may be the result of the acute form; but a great many cases, I might say the majority of cases, so far as my experience has been, occur from sexual excess and masturbation. Some cases occur as a sequela of exanthemata and rheumatic fever and probably syphilis. Chronic inflammation of the ovary is not an uncommon disease, for out of eighty-one dissections Henning found the ovaries diseased in fifty-three cases. Time will not permit me just here to go into the pathology of chronic ovaritis. I shall only give symptoms and treatment. The symptoms which have enabled me to class a number of cases together as chronic ovaritis are: First, in the history of the case, that the monthly periods have been irregular, generally too frequent, and that they have been too profuse. If the affection have a subsequent origin, then there can be obtained some story of a sufficient reason for the disease, either in gonorrhœal infection or a puerperal accident leading to an acute inflammatory attack or an over indulgence in the sexual congress. There is nearly always a sense of weight and fullness in the ilio-hypogastric region in chronic ovaritis, and sometimes there is tympanitic swelling. The discomfort is so great the patient can not bear her corset very tight. Sickness and nausea are often present, and generally just a few days before the menstrual period. There is a marked depression of the nutrient and nervous system; at times I have found my patient with a capricious appetite. The bowels are generally constipated. These symptoms are progressive, the patient's general health becoming more impaired month after month as the disease advances. There is generally menorrhagia. Still in some old standing cases amenorrhœa is the result. All of thee symptoms are aggravated by walking, standing, or riding or any overexertion. Sexual excitement and coitus usually cause a great deal of pain. By physical examination we find the ovaries tender to the touch, sometimes the ovary is movable and occasionally a separation from the uterus can be distinguished. The physical signs and symptoms of chronic ovaritis greatly resemble those of ovarian hyperæmia. The prognosis of chronic ovaritis depends a great deal upon the early treatment. Chronic ovaritis should be carefully treated as early as possible.

TREATMENT.

The first steps in the treatment of chronic ovaritis is to lessen the blood supply and relieve pain, by correcting the deranged enervation. This requires rest in the early stages, in the recumbent position; much good may be derived from massage, or some kind of exercise in the reclining position. The bowels should be kept well open with saline laxatives. Tonics are indicated in almost all cases. To relieve the pain and lessen the hyperæmia, I usually give bromide of sodium in combination with fluid extract of hydrastis.

℞ Bromide Sodium gr. xx
Fluid Ext. Hydrastis gtts. xx

Three times a day I find produces the desired effect. Good results may be obtained by the administration of salicylate of sodium gr. x in combination with grs. v of antipyrine, best given before or between meals. I also find sulfonal a desirable remedy. When iron is indicated I give small doses of mercury with chloride of iron. I also give syrup iodide of iron in large doses, if the chloride and mercury is not preferable. As to surgical interference in these cases, I only have to say, the advancement of abdominal and pelvic surgery at the present time has resulted in the removal of ovaries as the most prompt and efficient treatment of chronic ovaritis. If the ovary is causing great suffering, and the indications are that it will be a long and tedious trouble to the patient, and most especially if general and persistent treatment on the part of the physician has failed, also taking into consideration that the ovaries are not necessary to existence, and can be removed perhaps with safety, then I think the ovary should be removed. It is in accordance with the rules of modern surgery to remove any organ or portion of the body that one can live without, in case a disease of the part tends to take life or cause untold suffering for an unlimited time. Yet I am only in favor of removing the ovary when it is utterly impossible to save it. The ovary, if it is possible to save it without jeopardizing the patient's life, and making her a lifetime sufferer, it should be done, for as Dr. Goodell has so wisely said in a paper before the Pennsylvania State Society, "in the popular mind a woman without ovaries is no woman."

Modern Views of the Nature and Treatment of Pulmonary Tuberculosis.†

By H. B. Weaver, M. D., Asheville, N. C.

If an apology is necessary for the introduction at this meeting of a subject of which so much has already been written it is found in the vast importance which attaches to, and the wide diversity of opinion regarding the nature and treatment of pulmonary tuberculosis. Perhaps this phase of the subject, "including prevention, represents the most active fields of medical thought and research during the last two decades."—(Pritchard.)

Notwithstanding the practical results that have been attained by the hygienic prevention formulated upon the better knowledge of the cause and nature of the disease, which reveals the fact that in the United States alone, the death rate from consumption has been reduced thirty-eight per cent. in the last ten years, yet the fact remains that the mortality from this fearful scourge amounts to more than all other contagious diseases put together, and yet further, at the end of this decade, the medical world stands viewing with great concern and anticipation the results of the incessant toils, both in laboratory research and clinical experimentation of such men as Trudeaux, Von Ruck, Klebs, Denison, Waugh, Waxham, Whittaker, Paquin, Mosler, Brunton, Hager, Gerhardt, and many others, the sum of whose labors is simply appalling in dimensions, to find, if happily, among all these newer methods and measures of treatment, any remedy that might be classed in the nature of a specific for consumption. Although the concensus of opinion at the present is not assuring, yet the dawning of the 20th century is radiant with hope, for we shall yet surely find a remedy indeed.

It is universally conceded by eminent pathologists that two-thirds of the human race are afflicted with tuberculosis. Of 100 complete autopsies made by Schlenger, 66 bodies were found tuberculous. Osler found in 1,000 necropsies, excluding 216 which died of phthisis, 59, or 7 per cent., had tuberculous lesions, which had been repaired. Buchord found in his post-mortems over 75 per cent. tuberculous.

In the language of Whittaker, we will say, therefore, to be within the limits of perfect safety, "that two-thirds of mankind are effected with tuberculosis, and one-third dies of the disease." "Therefore, in one-half of all the cases recovery is complete, or the disease is reduced to such quiescence as to become practically non-existent." If one-half of all the cases are cured spontaneously, nature then must provide a remedy within her own resources by which this cure is accomplished. What is the process of cure? All intelligent thera-

†Read before the Tri-State Medical Society of the Carolinas and Virginia, at Charlotte, N. C., January, 1899.

peusis is necessarily based on a correct understanding of the pathogenesis of the given disease we wish to treat. Without a reasonable and just conception of the cause and nature of consumption, we cannot imitate nature in her process of cure. Pulmonary tuberculosis is primarily, in the great majority of cases, a local disease, involving but a small portion of one lobe of the lung. This process follows well defined routes. Catarrhal affections of the bronchial membranes, regularly accompanied with superficial denudation of the epithelium, serve as portals for the entrance and implantation of the spores of the bacillus. From this focus they advance through the lymph spaces and lymph channels into and through the blood, and rarely, if ever, along the mucous surface from the mouth to the air cells.

Pathology teaches that one peculiarity of the tubercle bacillus is to incorporate itself with a white blood corpuscle, and by its toxic stimulation, converts it into a large lymphoid cell and to a multiplication of the connective tissue cells of the parts. After a while this lymphoid cell will grow to the proportions of a multinuclear-giant cell, containing a number of bacilli. They induce vascular changes and increased deposits of leucocytes which have emigrated through the thinned walls of the terminal vessels ready to join themselves to the spores of the bacilli which have disappeared in the granular mass which is the result of coagulation af the nucli of the lymphoid and great cells. With the formation of this agglutinated mass of decayed cell elements the process of caseation is established. The presence of this mass of necrosed tissue acts as an irritant upon the capillaries of the vicinity and a wall of new formed granulation tissues is thrown up around the focus. If this barrier of new formed tissue is sufficiently strong to withstand the further invasion by the bacilli, there will be encapsulation of the focus and arrestment of the disease: otherwise there will be extensive caseaous infiltration. An increased exudation of blood serum will finally bring about emulsification of the cheesy focus and the beginning of an abscess cavity.—(Gerster.)

Thus we have presented a classical picture of the evolution of a veritable tubercle; and pulmonary tuberculosis is but the aggregation of a number of tubercles in one or more portions of the lungs.

Therefore, if these modern theories of the nature of tuberculosis, the truth of which since the discovery of Koch announced in 1882, no longer remains to be demonstrated, three facts are brought out very clearly:

1. That from thirty to fifty per cent. of the cases make spantaneous cures according to nature's process.

2. That tuberculosis is different from other microbic affections in that it is not self-limited or self protected,

3. That it is distinguished from a majority of other affections in that we do no find leucocytosis attending it. t

"Can we correllate these facts and infer that the failure of self-immunization is due to the fact that nature has here failed to combat the disease for a lack of her defenders, the leucocytes? Nothing in art approaches the efficacy of nature in controlling and curing tuberculosis. The natural processes of cure would seem to be first, that means by which toxins, or anti-toxins are manufactured in the body which will directly destroy the tubercle bacilli; or, in the second place, by sterilizing, immunizing or invigorating the soil. All more or less of the latter methods of treatment have been in imitation of nature's process of cure.

If it be admitted that there are on every hand around us instances of acquired immunity to tuberculosis, and if the disease is due to a special toxin working in the system, it must be only through the development in that system of an appropriate anti-toxin, or by the injection or otherwise, of an anti-toxin manufactured outside of the body, that there will be produced a resistance sufficient to stay the progress of the disease. In serum therapy each of these theories is contending, to-day for the mastery.

The first that there can be created in the body an anti-toxic condition of the blood and tissues, which will be antagonistic to the further tubercular infection, finds its correllate in the *primary* or direct method of treatment.

The second, "that instead of exciting in the human body a resisting anti-toxin, it is created in an animal and given to the invalid gratis," finds its counter-part in the *secondary* or indirect method of treatment.

The first, or primary, method is that inaugurated by Koch, and consists of the use of tuberculin, or some of its various modifications, some of which are tuberculocidin, antiphthisin, oxytuberculin, tuberculin R, and Von Ruck's Watery Extract of Tubercle Bacilli. The second consists in the use of the different serums produced from the animals, such as the goat and horse, some of which are Muralingous, Paquin's and Fich's serum. About these two methods there is as yet great speculation. Time is yet too short to pronounce dogmatically, without sufficient clinical tests, in favor of either. Reasoning from analogy, as in the case of anti-toxin as a specific for diphtheria, it would seem that some positive cura-

tive results might have been expected from serum therapy. As a matter of fact such results have been claimed, but these claims have been disputed by equally as competent observers and the evidence in support of such claims are, to say the least, inconclusive. The burden of proof lies, therefore, with the advocates of the *secondary* method upon the following propositions:

1. To what extent can natural immunity to the disease be conferred through the serum of a horse to the human being.

2. The length of time the animal should be treated before it is immune, and the length of time that should elapse after immunization before the serum is withdrawn.

These are pertinent questions. Prof. Waxham, of Denver, replies in effect to these propositions, "If anti-toxin is nature's remedy for overcoming disease, it would seem that in a disease that is essentially chronic, with no tendency to self-limitation, if immunity is conferred, it would be necessary to supply the system continuously and indefinitely in order to preserve the immunity and prevent a relapse."

A patient with tuberculosis in its earlier stages may be cured by the administration of anti-toxin. Will he remain cured and how long are important considerations. "In diphtheria it has been proven that the immunity produced by anti-toxin in full protective doses last at most only three weeks. Is it reasonable to suppose that an anti-toxin for tuberculosis would produce immunity for a longer period. If the patient's environment is not changed, if the same conditions and environments exist after as before the treatment, or if the patient inhales again the fatal bacillus, will there not be a return of the disease?

On the other hand the direct method has more to recommend it to general favor in that it has possibly but one element of doubt: the toxity of the bacterial product.

There are two bacterial products that differ from all other tuberculin preparations. They are Koch's Tuberculin R and the "Watery Extract of Tubercle Bacilli" produced by Dr. Von Ruck. Both of these authors claim that their preparations are pure solutions of the proteids of the bodies of the tubercle bacilli themselves and are unmixed with the culture fluid upon which they grow, wherein they are distance from all other tuberculin products. It is claimed, and not without show of reason, that Tuberculin R was not a pure solution of the proteids, but an emulsion of the fragments of the bodies containing fats. The withdrawal of this product from use by the manufacturers is sufficient proof of this claim. The superiority of Von Ruck's method over all others consists in the fact that he succeeded in extracting the fats with sulphuric ether. Of this product he says: "The Watery Extract as produced by me, and into which absolutely no culture fluid enters, is free from all admixtures and impurities. It is a perfectly pure solution of the germs only, and being filtered through porcelain, is absolutely free from any germs or fragments thereof. For its preservation a fraction of a percent of Phenol is added, which in nowise alters its clinical value."

I have been rather particular in describing this product as I believe it the most reliable and potent one of the tuberculin products and one from which the profession should get better results in the treatment of consumption than all others.

During 1898 Dr. Von Ruck treated with this Watery Extract, 78 cases of pulmonary tuberculosis at his Winyah Sanitarium, in Asheville, N. C., with the following results:

	No. Cases.	Recovering.		Improved.				Stage	
A	20	3	20	100	00	00	00	00	0 1st
B	37	4	27	73	7	19	3	8	0 2d
C	21	4	3	14	9	43	7	33.3	2 3d
Total	78	3.75	50	64.1	16	20.5	10	12.8	2 2.6

Among the 78 were 14 with tuberculosis of the larynx. In 9 instances of more or less tubercular infiltration of the larynx the infiltration disappeared under treatment in 4, was greatly improved in 2, and improved in 3.

Dr. Williams, of Asheville, also reports 12 cases treated by him with the Watery Extract during the past year. Seven of these were first stage cases, all discharged as cured. Three, more advanced stages, 1 of which was discharged cured, the other 2 greatly improved; 2 cases in the third stage, 1 of which was discharged cured, and 1 case (treated only 3 weeks) grew worse.

Drs. Denson and Longstreet Taylor both have obtained good results from this remedy.

The anti-tubercle serum of Paul Paquin has been used in a great number of cases by different physicians with apparent benefit. Bishop, of Chicago, in his new edition, reports 361 cases that are of value in recommending this remedy to the favorable consideration of the profession.

Paquin has reported 293 with the following results: Recoveries that seem permanent, 57; considerably improved, 36; improved, 121; disappeared from observation, 41; deaths, 36. Add to this 76 later cases of Bishop and we have the following total results: Recoveries, 71; improved, 205;

unimproved, 14; disappeared, 41; deaths, 38. Dr. Charles Denison has reported good results from the use of Karl Fich's serum, the details of which we have been unable to obtain. Dr. Ambler also reports that he has had very great success so far with this remedy in 120 cases, the report of which is not yet completed by him. He continues to use it with increased faith in its efficacy.

As to the drug treatment of consumption, creosote and some of its derivatives are the only drugs that have held their places in the treatment of this disease. That creosote acts as a specific no one of any repute pretends to claim. Summerbrodt maintains that creosote alters the chemical properties of the juices of the body so that they no longer furnish a suitable soil for the tubercle bacilli, the colonies of which will not grow in it. Ludwig claims that creosote destroys the toxin of the tubercle bacillus, and Peter ascribed its virtue to the substitution of a curable hypermia for a tuberculous hypermia. Trudeaux found that rabbits inoculated with tuberculosis and then treated with creosote subcutaneously, present the same lesions as control animals not so treated.

Dr. Burroughs, of Asheville, is the promulgator of a treatment which he denominates "Intra-Pulmonary Medication" for the cure of tuberculosis. It consists simply of the introduction into the lungs of a medicated spray under high pressure of three or four atmospheres from an air receiver with a De Villeis instrument. The medicament consists essentially of some of the antiseptic oils, such as 20 drops menthol, 20 drops eucalyptus, 20 oil Pine needles and 20 drops of creosote to half oz. Glymol. He claims great success from this treatment, of which I have been eye witness of many cases. I am sorry that I am unable to give a detailed report of his many hundreds of cases.

It is certain that creosote in doses that can be safely administered, either by the stomach, hypodermically, or by inhalation of vapors or sprays medicated with it, has no direct influence on the tubercle bacillus or on the streptococcus. The same argument holds good in regard to any and all antiseptic or germicidal medicine, such as the essential oils, menthol, thymol camphor and the terebenthenate, which dissolved in purified petrolium oil, are under high pressure forced into the air passages. They surely do good in the way of stimulating the cough and expectoration, relieving the always existing bronchitis and inflammatory conditions of other mucous membranes, but to say that they attack the bacillus in its habitat and then and there so sterilize and neutralize its effects on the tissue in the tubercular process, is to say the least, not in accordance with the views of eminent pathologists. But, nevertheless, the virtue of creosote is undeniable in the treatment of consumption, although not so popular as in former years. To my mind creosote acts by destroying the organism which sets up fermentation in the stomach and intestinal canal, thereby improving digestion and nutrition. The remedy acts best in moderately large doses, say from 15 to 30 drops after meals, given best in milk.

Climate.—The universal testimony is that climate actually cures consumption. "It is accepted in fact," says Dr. Whittaker, "that climate, meaning for the most part, climate of altitude, is a remedy so powerful, as, if practicable in every case, to render superfluous every other treatment." "Altitude acts in various ways. First, by dryness. High air is dry air and dryness is inimicable to the growth of the bacillus." Second, by cold. Cold favors dryness. It also stimulates the nervous system and induces sleep. Third, a high altitude has sunshine. The tubercle bacillus is killed only by sunshine. Tubercle bacilli are killed by direct exposure to sunlight from a few minutes to a few hours. Fourthly, altitude gives "gymnastics" to the lungs and developes the collapsed air cells, causing them to take more oxygen and hence more ozone, which is carried by the red corpuscles to the tissues, which are invigorated thereby. An ideal climate, if it could be found, for consumption is one of moderate elevation, 2,500 or 3,000 feet; moderately moist and moderately warm, with sufficient sunshine; where the changes in temperature are not too sudden or too great.

We believe we are safe in saying, without exaggeration, that more of these elements of desirability are found in the climate of the Asheville plateau than any other locality in the United States. This region is indeed the happy medium for the all-the-year-round residence for the consumptive.

While the lower regions of the southwest, such as Aiken, Thomasville and San Antonio, perhaps possess the proper requisites of dryness, yet they are deficient in the great essential, which is so potent in its nature for the cure of consumption, and that essential is altitude. The New Mexico and Denver regions have in their favor altitude, yet they do not possess a sufficient amount of moisture and warmth for the most favorable influence upon the disease. The average precipitation of the Asheville climate is about 60 in the summer and 50 in the winter, while the average temperature is about 45 in the winter and 70 in the sum-

mer, and the sun shines 300 days in the year.

I have purposely refrained from the consideration of the hygienic and dietetic methods of treatment, from the fact that there is nothing new to be said in reference thereto.

In closing this paper, for the length of which I ask pardon, I beg of you to join me in the indulgence of the hope that these modern methods of investigation and treatment will bring, in the near future, the boon to mankind—the sure cure for consumption.

DISCUSSION.

Dr. Monroe.—If Dr. Levy is present I am satisfied he can tell us something along this line.

Dr. Levy.—I thank Dr. Monroe exceedingly for calling upon me, and I will state that before Dr. Weaver left his seat he requested me to discuss his paper, and I agreed to do so, but after hearing the paper, Dr. Weaver having taken the subject up so fully and methodically, and it is so excellent in every respect, I hope he will excuse me from my promise, for there is really nothing to say after his able exposition of the subject.

The Society insisted on hearing from Dr. Levy, and he continued:

I would just say that I agree most heartily with Dr. Weaver in regard to his expressions as to toxins and antitoxins in this disease. I had the opportunity last May here to express my views on this subject in the course of a discussion by Dr. Minor of Asheville, on the attitude of the general practitioner towards serum therapy, and I then expressed the same opinion which Dr. Weaver has expressed to-day, that tuberculosis not being a self-limited disease there is very little hope at any time from using the real antitoxin, because antitoxins are not agents which have any bactericidal action whatever. What we need in tuberculosis is certainly not antitoxins, but a germicidal agent. Antitoxin will never be of any use in limiting the extent of the tuberculous process, or certainly in putting an end to it.

Dr. J. A. Burroughs.—Mr. President and gentlemen, I enjoyed Dr. Weaver's paper very much, was in a better frame of mind to discuss it this morning than I am now, just coming out of this committee meeting.

Would say this, that I think we have no specific for tuberculosis, but that we should bring forward every known remedy and everything that we know in regard to the management and treatment of the subject that would result in a cure of the trouble; believe, first of all, that climate ranks above everything in regard to the treatment of tuberculosis; placing the patient in a proper climate. Secondly, believe that proper food, nitrogenous food, so as to get the digestive tract in condition, that it will assimilate food, is a great help, for instance, milk, good beef steak, eggs, &c.

Then pulmonary gymnastics, which is of value; teach the patient to take deep, full, long inspirations many times daily in a clean, non-dust, non-germ-laden atmosphere where he has to make a number of respirations a minute to get enough oxygen in his lungs, in doing this collapsed air cells are brought into action and a better pulmonary circulation induced. Believe in sending this class of patients up to the mountains where they can receive the benefit of the altitude and get more oxygen in the system, increase the red corpuscles of the blood, and also enjoy an atmosphere which is not germ laden, thus placing them in a better position for an arrest or recovery.

Again, I believe in intra-pulmonary medication. Dr. Weaver touched upon that subject this morning. Of all treatments that have been suggested, I think intra-pulmonary medication, with proper food and hygiene, and in skilled hands, is best. My observation with intra-pulmonary medication has been such that I would almost be afraid to lay the record of my books before you to-day showing the cases I have had, have never done so, but some day I propose to give them to this society, and it is a matter of no consequence to me whether they believe them or not. Dr. Weaver asked me to state to the Society the manner in which I give this intra-pulmonary medication. It is not in a large room that is filled with fumes of germ-destroying oils, but is a simple thing. Have a large hydraulic pump in the basement, that gives about ninety pound pressure, and several tanks and receivers, have my rubber hose connected with the cut-off and Devilbiss spraying apparatus, which can be turned any way. The fluid used for a base is glymol, a preparation from petroleum, a very powerful germicide and antiseptic itself, it has the property of dissolving the sputum like glycerine. In this glymol I place, say in the cup, about half an ounce or more, say five to ten drops, of creosote, fifteen to twenty drops of oil of eucalyptus, fifteen to twenty drops of oil of pine needles, and fifteen to twenty drops of menthol saturated in glymol, which would be, at least, ten grains of menthol.

It is a great aid in teaching patients how to breath, have the women to undo their corsets and have their clothes loosened, and teaeh them to take a deep inhalation so as

to get it down into the air cells; teach the men in the same way to breath it down thoroughly, but both men and women will have to be careful to have no clothing too tight or they will fail to expand chest and derive full benefit from the local application.

Would say this much, when no other remedy is given except this intra-pulmonary medication, as above described, in the Asheville climate, it is remarkable to see the way the temperature will come down under this treatment; you take a patient there and the temperature runs from 102 to 103 every afternoon, and you give him the treatment, if you can get him to take it thoroughly you will find that the temperature will begin to drop a fraction of a degree, and the first thing you know you have a temperature of 99, or normal; you will have it that way in ten days after you start the intra-pulmonary medication. If you give this treatment for a month and the temperature does not drop under it you had just as well send the patient home.

In regard to medicine internally, have found nothing in the way of value in the stomach except creosote. I wrote a paper for the Southern Medical and Surgical Journal of Savannah, on the use of Creosote in Tuberculosis, and I want to lay special stress on creosote, because the majority of the drug on the market is nothing more nor less than carbolic acid. If you will give Morson's Creosote, made from beechwood tar, as I have given it, you will find it of value, but if you give commercial creosote, in the doses that I give it, you will have carbolic acid poison. Creosote made from beechwood tar is not irritating, disinfects the alimentary tract, and, in my mind, does have a special action on tuberculosis. This creosote is given in from twenty to ninety drop doses three times daily; in that way it assists digestion, &c. Cod liver oil is a splendid food when the patient is able to take it, but in this treatment of intra-pulmonary medication with creosote and good food in the right climate, it is remarkable to see the way the patient gains flesh and the color come to his cheeks; the gratitude of the patient is something to make the physician feel happy.

Dr. Louis F. High.—I can't improve on the most excellent expositition of the treatment of tuberculosis as set forth by Dr. Burroughs, but I can add an humble amount to what he has said, hoping in that way to increase the sum total of knowledge in regard to the subject. In the matter of climate I am abundantly able to say from an analysis of forty cases that the effect of it is sometimes remarkable. I don't mean to say that in Danville, where I live, we have a climate that is of the most desirable kind in which to treat tuberculosis, but in an observation of forty cases of consumption developed among persons whose occupations have kept them indoors, I have been able to see the good effect of pure air and sunshine, the effect of change of occupation and putting those people out of doors to live, and in a record of forty cases in which the disease developed among people whose occupations kept them indoors for twelve hours during the twenty-four, I have noticed the impovement in every case in which those persons have ceased to labor indoors, have ceased to labor entirely, or taken an outdoor occupation, and therefore it shows very plainly to me the advantage of sunlight and the advantage of change of scene, and those things which tend to produce constructive change, is something very remarkable. And therefore I would urge as a matter of treatment that a case developing consumption whose occupation keeps him in doors, that the very first thing that should be done is to leave off the occupation and engage in labor that keeps him out of doors a great deal.

Dr. Chas. B. McAnally.—I want to say just a word in regard to this matter, and I want to disagree with Dr. Burroughs just a little, too. I know what I do when I take such steps as that, but it is in regard to the cod liver oil. Now, as Dr. Burroughs said, that does a great deal of good where they will take it, but every patient that you find, one of the first manifestations that he brings to you when he comes to your office is the dyspeptic symptoms, and after they reach that stage, cod-liver oil will not be takan in the majority of cases. There is another point about this treatment that I fully agree with, and that is the inhalation of that medicated air. I have myself during this last year gained considerable benefit in two or three cases from that, but others I didn't get any, whatever, though the general effect that it had on my mind in regard to the treatment was that it offered as much benefit as almost anything else.

Dr. J. N. Upshur.—I would like to say just one word in that connection. I listened to this discussion with a great deal of interest. One of the things struck me individually. There have been a number of cases that these gentlemen have seen. I am thankful to say that in my own experience in Richmond Isee a minimum number of cases of tubercular consumption. Of course, in an experience extending now over a good many years, I have seen a good many cases of consumption, but the thing which pointed most to the conditions attending upon con-

sumption, in my observation, is that it begins away back, often before the patient gets to the doctor; there is underlying the whole thing, and as the starting point in consumption, that condition which we call malnutrition. The patient is a little off in strength, begins to lose appetite. has quickened pulse, some difficulty in breathing, upon exertion, and you examine that patient, gentlemen, and you don't find any signs there to point to the fact that there is any trouble, except you may find some little weakened respiration. There, as a starting point in cases of consumption, is malnutrition down at the beginning. I don't propose to discuss this question of the germs in consumption, because we all know what is found there, but they don't find it, so far as I am aware, back in the beginning of this condition of malnutrition. Now the whole question of the treatment of consumption turns upon one significant fact, and that is the fact of an improved nutrition; and everything that these gentlemen have said with regard to climate, diet, etc., is simply a point in that direction, for improve the nutrition in the patient and that lesion in the lungs gets better, not because they use medicated air, with oils of various kinds in the lungs of that patient, but simply because they are doing what is improving the nutrition of that patient, and just in proportion as you improve the nutrition of a patient and get it up as far as possible to the normal standard, just in that proportion the patient gets well as a consequence, not because by putting into the system these various things they will help that patient cure that case by killing the bacilli, but because the thing which is most fatal to them is an improved nutrition. That is to my mind the salient fact.

Dr. J. A. Burroughs.—The doctor has struck the key note; there is no doubt in the world that every case of tuberculosis has its origin in malnutrition, and every physician who is up on the subject, recognizes this fact. Want to say in intra-pulmonary medication, no man can take hold of this subject and learn it all at once, I learn something about it day by day; treat my patients better now than I did last year, and treated them better last year than I did the year before, my records show this, but I want to say this, that you liquefy the sputum this way easier, killing out the germs in their very home, preventing a re-absorption of the poison in the system and infection of new area of tissue, as there would be if you did not give intra-pulmonary treatment.

Dr. Upshur.—I just want to correct the doctor in one point that I am afraid he did not mean. I am not saying anything against interpulmonary treatment. The point I want to make is simply a help, and that what cures the patient is getting the patient's nutrition up to or above the normal standard.

Dr. Weaver.—Mr. Chairman, in closing this discussion. I plead guilty to the soft impeachment of Dr. Upshur. I do believe in the idea that malnutrition is the great prime factor in the causation of tuberculosis. But the length of my paper prevented a further elaboration of that phase of the subject. I even go further than the speaker and maintain that there is a condition anterior to the bacillary infection and that condition is more than a predisposition or dyscrasy, — it is a disease itself which we have to treat; that disease is an hypertrophy, as Cohn says; it is malnutrition. That condition of the body is the first primary factor and Koch's tubercle bacillus is the secondary factor in the causation of tuberculosis. Hence I believe that it is of the first importance to improve by any and all means the nutrition of the body. This is where heredity comes in with its work. It is the inheritance of the seed, the subjects fail in conformation of the chest, he has small expansion on inspiration, weak heart, pale and anemic skin, no vitality, a true (?) predisposition to consumption, a failure in the vital energies. This condition can also be acquired. Anything that debilitates, the enervation of the nervous system, an inflammatory condition of the air passages (bronchitis for instance), the debility resulting from some infectious disease (such as measles or influenza) any or all of these acquired conditions, are prime factors in the etiology of this disease. Hence our first treatment is to improve these conditions by hygienic and dietetic methods, regulation of exercise and food and sleep, and all the auxiliaries to health. Then come our later methods of treatment of which we have spoken. Now in regard to Dr. Burroughs' "Intra-Pulmonary Medication."

We do not believe that the medicated sprays have a specific action on the tubercle bacillus in its habitat, but that they stimulate expectoration, soothe and mollify the inflammatory conditions of the air passages, especially the bronchitis which is, more or less, always present, and has a germicidal effect on the streptococci, which are always present in large numbers in advanced stages of tuberculosis and which are the cause of the mixed infection and the resultant fever. This, I think, is mainly and especially the benefit to be derived from the medicated air treatment. I employ this method a great deal, whenever and wher-

ever the case demands it. I use a common air receiver, with from 30 to 60 pounds pressure, with a Davidson or DeVilbiss tube, which will throw the medicated air far down into the bronchial tubes and probably into the air cells themselves.

The medicines that I use are various ones, including the essential oils, terebinthenates, carbolic acid and creosote. I vary the mixture and strength according to the patient. This is a favorite prescription: A 3 to 10 per cent. of camphor-menthol in glymol, followed by the inhalation of 20 drops each of eucalyptus, oil of pine needles, carbolic acid and creosote dissolved in glymol. If these sprays are used intelligently and persistently I can testify from my own experience in a great number of cases they will be of great and permanent benefit to the patient.

Just one other thought, Mr. President, and I have done. Dr. Burroughs referred to the fever accompanying tuberculosis. In regard to its cause, especially in its later stages, I want to say this: It has been demonstrated over and over, by competent observers, that simple uncomplicated tuberculosis is easily curable, yet it may seem strange to the casual observer how few cures are actually made. And what is the reason? It is because so few cases in the incipiency of the disease, uncomplicated with other infectious micro-organisms, are met with in actual practice. We all know that unless tuberculosis is accompanied by some other pathologic lesion, the progress is very slow, that the tubercle bacillus very seldom causes rapid tissue changes, and scarcely or never produces pus. But it is when other micro-organisms, especially streptococci and staphylococci make their appearance that rapid necrosis and breaking down of the tissues take place. Then we have the mixed infection. It is then we have the hectic fever resulting from the absorption of the streptococcus germ into the system. In every instance in my experience where I have had rapid destruction of tissue in pulmonary consumption with profuse expectoration; on microscopical examination of the sputum, there have been found in large numbers the streptococci. It was in these cases I found the fever, and it was in these cases I used the spray, of which Dr. Burroughs and myself have spoken, with such marked effect. After a thorough application of some of these germicidal medicines to the bronchi and air cells, the fever generally fell one to three degrees and the patient was always rendered more comfortable. Herein is where the medicated sprays, under proper pressure do their effectual work. They kill the streptococci in some degree and stimulate the lungs to throw off the pus in which millions of these germs are imbeded, at the same time they soothe and heal the inflamed mucous membranes. This, to my mind, is the salient point; this medication stops the streptococcal invasion.

Report of Two Successful Nephrectomies.†

By George Ben Johnston, M.D., Richmond, Va., Professor of Gynecology and Abdominal Surgery, Medical College of Virginia.

The two specimens which I present for your inspection are from a considerable collection obtained during the course of a large number of operations on the kidneys. I do not offer them because they are unusually rare but because they are fine specimens of their types and chiefly because the troubles for which these kidneys were removed grew out of mobility of the organs and illustrate dangers to which I directed the attention of the profession in a paper on movable kidney, presented to the Southern Surgical and Gynecological Association several years ago.

Case I.—*Nephrectomy for cyst of right (movable) kidney. Recovery.*—Case referred by Dr. Moses D. Hoge, Mrs. J.P.A., aged 60 years. About fifteen years ago patient herself noticed a movable tumor on the right side of the abdomen, and, on calling the attention of her family physician to this, the latter diagnosticated movable kidney. Since that time patient has suffered with intermittent attacks of gastric and nervous nature. These have gradually become more frequent and severe, and had been especially annoying during the twelve months preceding the time at which I was called in consultation. Rapid increase in size of tumor for past eight months, and this increase especially pronounced during past two weeks. Patient not confined to bed. Complains of numbness of lower extremities, especially on right side. Appetite good. Bowels and urination regular.

When I first saw this case, in consultation with Dr. H. H. Levy, the diagnosis was made of movable kidney with probable hydronephrosis, and it was thought that only a nephrectomy would afford a cure. Before undertaking this an examination of the urine was made to determine the adequacy of the other kidney to carry on the function of both organs. This examination showed such a marked diminution in the

†Read before the Tri-State Medical Society of the Carolinas and Virginia, at Charlotte, N. C., January, 1899.

amount of urea eliminated that I advised against immediate operation, deeming it best to obtain further information on this point. The patent then passed into the hands of Dr. Hoge, with whom I again saw the case in consultation. By this time the excretion of urea had more nearly approached the normal and operation was advised.

The patient was admitted to the Old Dominion Hospital on Nov. 14, 1898. Examination through relaxed abdominal wall revealed the presence of a large, smooth, globular, freely-movable, fluctuating tumor in the region of the right kidney, which was thought to be either a hydronephrotic kidney or a cyst of that organ.

Operation.—November 15, 1898. Chloroform anesthesia. Langenbuch's incision. As soon as the peritoneal cavity was opened the left kidney was searched for and found to be present. It was much hypertrophied. The intestines were then displaced to the left and padded away with gauze sheets. The posterior layer of peritoneum was incised and the cystic kidney liberated. The vessels and ureter were ligated separately with heavy chromicized catgut. There was practically no bleeding. The slit in the peritoneum was closed with a running suture of fine catgut. The abdominal wound was closed with through-and-through sutures of silkworm gut. An impervious dressing, consisting of gauze covered by a layer of muslin saturated in flexible collodion, was applied. No drainage. The patient was on the operating table only twenty-eight minutes. During this time 16 ounces of normal salt solution were infused into the subclacular region.

Reaction was prompt and recovery was without event. This patient left the hospital in two weeks from the day of operation.

The kidney after removal presented a large cyst, with very thin walls, containing 500 cc. of clear fluid. A very small amount of apparently healthy kidney tissue remain-

ed. Microscopic examination of the unaffected portion was made by Dr. Moses D. Hoge, by whom the case had been referred to me, and he submitted to me the following report:

The kidney and sac with its fluid contents were placed entire in a formalin solution. A small piece of the kidney substance near junction of the sac with the healthy portion of the organ was removed for microscopic examination. The tissue was hardened in alcohol, embedded in paraffin, sectioned on the microtome, stained with indigo-carmine and mounted in balsam in the usual way. The fibrous capsule was considerably thickened and firmly attached to the kidney; the walls of the veins were unusually thin, while those of the arteries were considerably thickened, especially the intima. The venous system was empty; the arterial, filled with blood. The glomeruli were somewhat compressed and did not fill Bowman's capsule. The lining epithelium of the excreting tubules was intact, showing no change from the normal. A few patches, small in extent, of connective tissue were noted.

Comments.—Several forms of cysts of the kidney are recognized, of which the conglomerate cysts (or cystic metamorphosis), simple cysts, and hydatid cysts are the most important. The first of these is frequently congenital and is usually a bilateral affection, the latter fact rendering operation unavailable. Furthermore, nephrectomy, which would be the only operation to be considered, is not commonly indicated for the reason that there usually remains a considerable amount of fairly normal kidney tissue, which is capable of serving a useful purpose.

Simple cysts, of which the case here cited is an instance, are more amenable to surgical treatment. When of small size, and when situated in an otherwise healthy kidney, surgical intervention is not indicated. At other times repeated aspirations may finally cause disappearance of the cyst, but this procedure should seldom be resorted to. Again, incision and drainage may be indicated. In the case here reported none of the above-mentioned procedures were deemed advisable on account of the fact that the kidney was a movable one and the amount of healthy secreting surface remaining was not sufficient in amount to make its preservation desirable.

Hydatid cysts of the kidney are of rather infrequent occurrence, especially in this country.

Case II.—*Nephrectomy of left kidney (movable) for suppurative diseases, with calculus. Recovery.*—Mrs. M. E. L., white, aged 38 years. Married nine years, has had three children. No miscarriage. Consulted me December 5, 1898, and gave following history: Was reasonably healthy as a girl. Was tardy in commencing to menstruate, beginning at eighteen. Periods always regular and painless. When twenty began to experience vague pains in region of the left kidney. These pains were never continuous nor lancinating but sometimes severe, at no time, however, requiring morphine for their relief. Frequent attacks of "wind colic," sometimes nausea and vomiting and great nervousness. All symptoms aggravated during menstruation. Never had kidney colic nor passed bloody urine.

In July, 1897, while rubbing her side with a liniment she detected a lump. The lump was hard to the touch but not tender. Did not consult physician. Never had riggors, fever or sweats. Noticed no pus or blood in urine. Physical examination showed quite a large tumor below the short ribs, occupying the left side of the abdomen. It was freely movable in every direction. The question was to determine whether this tumor was one of the spleen or of the kidney. To throw further light on this question my colleague, Dr. E. C. Levy, made examinations of the blood and urine and submitted to me the following report: The blood examination showed 4,360,000 red cells and 12,000 leucocytes to the cubic millimeter. Hemoglobin 55 per cent. of normal. No hematozoa malariæ. The increased number of leucocytes were of the polymorphonuclear neutrophile variety. This examination, while not excluding all questions of the abdominal tumor being an enlarged spleen, at least showed that it was not a leukemic spleen and to some extent excluded a malarial spleen. After examining the urine and finding in it pus from the kidney, the leucocytosis was explained by the suppuration.

The urine was cloudy, markedly acid, with a specific gravity of 1.015 and contained a small amount of albumin. Microscopic examination of the sediment obtained by means of the centrifuge showed the presence of a morphoud urates, a moderate number of leucocytes, and a few red blood cells. The presence of pus in a frankly acid urine was considered indicative of its renal origin. Hence the findings in the examinations of the blood and urine in this case led to the opinion that the abdominal tumor was an enlarged and suppurating kidney (most probably from a calculus) rather than an enlarged spleen.

On December 10, 1898, I operated on this case at the Old Dominion Hospital, in the presence of the class of the Medical College of Virginia. The tumor seemed too large

to extract through a lumbar incision. I therefore executed a transperitoneal operation through Langenbuchs's incision of the left side. Right kidney examined and found normal. Intestine displaced to the right and protected by gauze sheets. Posterior layer of peritoneum incised. The freeing of the kidney was rendered tedious and difficult by many adhesions. The pedicle was ligated in sections, vessels and ureter separately.

Considerable oozing occurred and for this reason drainage was established by means of a rubber tube passed through an incision made in the loin. The rent in the peritoneum was closed with a continuous catgut suture and the abdominal wound with silk worm gut and dressed as in Case I.

The kidney after removal was found to weigh 435 grams, was of irregular shape and somewhat nodular appearance. Upon palpation it was felt to contain a large amount of fluid and also a calculus which branched as it extended up from the pelvis of the organ towards the perephery. Upon opening the kidney, 25 cubic centimeters of thick, yellow pus escaped. The large, branching stone (4.5 centimeters in its longest diameter) was exceedingly friable and was found on analysis to consist of calcium phosphate. There were eight distinct abscess-cavities, communicating more or less with each other. Only a very small area (about 2 centimeters in length) of apparently normal kidney tissue remained at the upper extremity of the organ,

The progress of recovery was reasonably satisfactory. The drain was removed forty-eight hours after the operation. Six days later temperature developed. I reopened

the drainage wound and evacuated a considerable collection of pus, after which everything went on smoothly. The patient was discharged thirty-eight days after operation.

Comments.—Stone in the kidney is the commonest surgical affection of this organ and the most treacherous. It simulates so many other conditions that its presence often escapes early detection. When it does not produce rapid disorganization of the kidney it frequently brings about such a degree of irritation as to reduce the victim to complete invalidism.

Early surgical intervention is most important. Nephrolithotomy, or the removal of a stone from an otherwise healthy kidney, affords infinite relief and is freer from danger than any other major operation. If a stone should not be found in every case, the condition producing the symptoms for which the operation was undertaken will usually be amenable to operation and result in cure, hence the failure to find stone is immaterial. Every suspected case should be explored.

Nephrectomy will only be required in those cases in which destruction of the kidney has taken place. When it is decided on, the supposed healthy kidney should invariable be first examined by inspection, palpitation, and incision if neceesary. This is easily accomplished in the transperitoneal operation. By the lumbar route a separate cut is required. Failure to observe this precaution has more than once led surgeons into improper radical steps.

DISCUSSION.

Dr. W. L. Robinson.—This is a very interesting subject and one in which I feel greatly interested. I will relate one case that is very instructive. A woman who had been suffering at intervals of six or eight weeks, for a year or more before I saw her, had great pain and vomiting, lasting two or three weeks, unable to sleep except under an anodyne. The trouble was accompanied by constipation, and relief usually came in the attempt from removing obstructions to bowels by large enemata. When referred to me she had been suffering with constant nausea and pain for ten days, and the trouble I thought came from a displaced kidney. I made an incision from the tenth rib down toward the McBurny's point and when I first opened I thought there was a cyst which turned out to be a dilitation of the ureter with the damning up of the urine from lesion; also the appendix was attached to the kidney. I simply moved the appendix, split the capsule of the kidney and sewed it back in place. That was four years ago with a perfect recovery and no attack since, in fact has not lost a day from work since.

Dr. J. M. Flippen.—I would like to ask Dr. Johnson if he doesn't think it advisable to catheterise the ureter in case of stone in the kidney, using a catheter tapped with wax. If there is a stone there, upon withdrawing the catheter and examining the ends of it with a lense, you will readily detect the scratch of the stone upon the wax. I would just like to ask him if he doesn't think that advisable in the case of such an operation.

Dr. Johnson.—It is an extremely difficult thing to catheterize the ureters—difficult in the female and still more so in the male—and with the point that of the catheter coated with wax the procedure would be further complicated. Besides, the volume of wax would necessarily be so small that any impression made upon it by contact with a stone would leave the operator still in doubt whether this impression had been made by a stone or by its coming in contact with some elevation of the mucous membrane. Now, I regard an exploratory operation on the kidney as a very trivial affair. I think it as free from danger as any surgical operation can be, and if there is a condition which is so pointed as to induce the belief that there is a stone in the kidney, then, in the event that no stone is found, the exploration will reveal some other condition demanding intervention, and will put us in position to relieve that condition. Therefore I think it far preferable to make an exploratory operation rather than attempt any makeshift of detecting stone in the kidney by so unsatisfactory a device as catheterizing the ureter.

Dr. J. M. Parrot.—I would like to ask Dr. Johnston if he didn't think it advisable to ligate the ureter and the pedicle separately?

I know in that operation where there is much inflammation, such as the doctor cited in the last case, it is almost impossible to ligate the pedicle separately by the lumbar incision, and therefore I asked the question. Now, we had a case at home sometime since very similar to this last one, and by the lumbar incision we found it impossible to separate, in fact, we didn't attempt it. I think time would have been wasted by such a proceeding.

Dr. Johnston.—If possible, I have invariably done that. In both cases here reported the ureter and pedicle were ligated separately. Sometimes this is difficult, but it can always be done, and easily done, through an anterior incision. By the lumbar incision, especially in fat subjects, where

you work through varying thicknesses of abdominal wall, it is an extremely difficult thing to do, and, therefore, in such instances I ligate the pedicle as a whole rather than attempt ligation in parts.

The Treatment of Urethral Discharges.†

By James M. Parrot, M. D:, Kinston, N. C.

In discussing the treatment of urethral discharges I shall confine myself to the direct pathological conditions causing them and shall exclude all the passing complications so often met with in this class of diseases. This restriction is made in order that more time may be devoted to the discussion of the treatment of the diseases themselves, and not because the complications are considered to be too infrequent to demand attention and so innocent as to be passed unnoticed. The treatment of urethral discharges has been more or less discussed since the days of Moses. Hundreds and thousands of ideas have been advanced along this line and it is neither desirable nor practical to discuss them all. Each method has its advantages and disadvantages. In the majority the latter overbalance the former while a few only present qualifications of sufficient importance as to demand really careful attention.

Until a few years ago gonorrhœa was treated empirically. No distinction was made either clinically, or therapeutically. The discovery of the gonococci, however, laid the foundation for a rational treatment, and since that time many improvements have been made. Some years ago Janet suggested the irrigation method recently practiced with such success by Valentine and Goldberg. As perfected by Valentine this treatment is the best yet devised. Statistics carefully selected by Goldberg show that 90% of all cases were cured within 14 days. In my hands it has cured 50% within 10 days, 26% within 15 days. 11% within 21 days, 8% within 28 days; the remaining 5% being much benefitted by it and doubtless would have been cured quicker had my directions been carefully followed. I have never had any complications since this treatment has been in use save in one case. This patient did very nicely for 6 days, and then failed to report at my office regularly for the treatment until the tenth day. At that time he was much better, however, and asked for an injection because of the inconvenience of the official treatment. On the 22d and 23d day he drank excessively, the urethritis rapidly grew worse. Later it improved a great deal, but about the 40th day a well marked gonorrhœal rheumatism developed.

The apparatus made by Reichardt & Co. is probably the best and usually I prefer a solution of permanganate of potash. On the morning of the 1st day I irrigate with 1-3000 solution, at the afternoon seance a 1-4000 solution is used. These anterior irrigations are coutinued in this manner daily until the 4th afternoon. At that sitting, after using half-pint of a 1-5000 solution anteriorly I elevate my apparatus and give a posterior irrigation, called by many, and properly an intro-vesical irrigation. By this time the disease is usually under control, however, if it has not improved very much it is well to postpone intro-vesical treatment until the 5th or 6th day. At the morning seance immediately following the first posterior irrigation, I treat only the penile urethra, after that all irrigations are intro-vesical; on the 7th or 8th day of treatment the discharge is generally scanty, and all symptoms much improved. Then only one treatment a day is given. This is continued using a solution varying in strength, according to the case and symptoms, from 1-6000 to 1-3000 permanganate of potash. By the 9th or 10th day all discharge has stopped, except rarely a slight mucoid matter from the anterior urethra. With such a case it is best to irrigate every other day for two or three time.

With this treatment I always at the very beginning prescribe salol in 5 grain doses 3 or 4 times a day. If much *ardor urinæ* be present it is well to give also an alkaline diuretic, a combination of benzoate of soda and citrate of potash being probably the best. The patient is of course placed on the usual diet and given the customary directions concerning personal cleanliness. He is specially cautioned against the use of alcoholic beverages and sexual indulgence. The following cases, chosen at random from my record book illustrate very nicely the average patient treated by this method.

Case 1.—Mr. C., age 22, general health good. When seen presented a well marked case of acute anterior gonorrhœa of 8 hours duration. Microscopic examination made and gonococci were discovered. Irrigation treatment was begun at once, as above described, and 15 grains each of benzoate of soda and citrate potash were administered every 4 hours for 3 days. Five grains salol were given 4 times a day for 6 days. On the tenth day he was discharged cured.

Case 2.—Mr. E. A., age 32, general

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health poor. For several years has suffered from indigestion and has the strumous diathesis. On examination I found a true gonorrhœa of 14 hours duration, gonococci being found in the discharge. The irrigation treatment was begun at once and an iron tonic ordered. Salol was given 3 times a day. He was discharged cured on the 14th day.

Case 3.—Mr. G. R., age 18. When seen had a pronounced acute posterior gonorrhœal. Posterior irrigations were begun at once and medium doses of salol and citrate potash, with tincture of hyoscyamus were prescribed. He began to improve after the second seance and was cured on the 16th day of treatment.

Case 4.—Mr. P., age 38, married. Wife much troubled with leucorrhœa. Gave a clean personal history prior to this affair. On examination I found a rather scanty, milky discharge. Meatus but little inflamed with mild *ardor urinæ*. Patient's father and grandfather died of tuberculosis, and he himself rather frail and delicate. No gonococci were found in the discharge. Anterior irrigations of a 1-2000 solution of nitrate of silver were used in the same manner as was the permanganate of potash in the above cases. Usual advice for such patients given and tonics ordered. On the 12th day he was discharged cured. In this case the silver salt was substituted for the permanganate of potash, because I believe it has, with such patients, a better and a peculiar controlling influence. This man evidently had an acute urethritis contracted from his wife who suffered much with chronic endo-cervicitis.

We are sometimes consulted by traveling men and others who can not, or will not, come to our office daily for treatment by this method. Then some other must be substituted. I begin at once with an injection aimed at the specific organism. If the germ is there why temporize and wait until the acute stage has passed, and after the gonococci have buried themselves into the deeper penile structures, and often out of our reach, or have travelled backward and produced a posterior gonorrhœa or some other complication of a serious nature? The only scientific treatment is to attack the enemy in his own stronghold and before irreparable damage has been done. I order at once an injection of a ½% to 3% solution of protargol, the strength varying with the case. The patient is given also, *per orum*, salol and, if necessary, benzoate of soda or citrate of potash. Protargol is by far the best remedy for urethral injection, and does not form an albumenoid with the tissues and secretions so quickly as do the other silver salts; argonin is also very good, being better than the nitrates. Careful direction should be given as to the use of the injection, and a conical, pointed urethral syringe should always be ordered. My own experience with protargol in 17 cases has proven that it lessens the liability to, and the frequency of, complications, and cuts short the attack from one to three weeks as compared with other injections. If used early and properly posterior gonorrhœa will be very infrequent and mild. In all cases with much sexual excitemeut monobromate of camphor should be given in full doses. A very careful examination should be made of every case before the patient is discharged, and if not entirely well should be kept under treatment until all symptoms disappear, particular attention being paid to the presence or absence of clap shreds in the urine. This I consider is very important.

Subacute urethritis, either anterior or posterior, had best be treated by the irrigation method, when possible, though in these cases it does not cure so quickly as in acute cases. If the Janet-Valentine treatment is not practical then protargol or argonin should be prescribed with salol and alkaline diuretics. Here again it is necessary to give very positive advice as to diet and the use of alcoholic beverages and the indulgence in sexual intercourse. A careful watch should be kept upon the case and all complications promptly met and treated.

The successful treatment of chronic urethritis is often more puzzling than the acute or subacute varieties. Each and every case must be studied very closely. the cause sought out and the proper remedy applied. No physician can be entirely successful in this field of work unless this is done. When a stricture is found (and these are much less frequent than is generally thought) it must be gradually dilated, either by weekly vesical irrigations as described below, or by the passage of proper bougies, or preferably by both. Most strictures (67%) occur in the penile urethra, within two inches of the bulbo-membranous junction. They are easily overlooked and will be unless careful search is made. Of course a conical pointed bougie should be used in dilating it. An ordinary sound if relied upon entirely will often fail to make known the presence of a stricture. This should be remembered. A stricture of large caliber, if of a valve-like construction will cause much trouble by producing a prolonged urethritis. It catches the urine behind its folds, and retains a few drops which decompose to a certain extent, and act as an irritant. It causes also a ballooning of the

urethra at this point and thus produces a catarrhal inflammatory process there.

When no stricture is found the urethra should be carefully inspected with an endoscope and all local foci, if any be found, touched with a 40 gr. to ounce solution of nitrate of silver. If the urethra present a catarrhal inflammation, injections of a 1 to 3% solution of protargol is beneficial. This should be combined with the proper internal treatment for the strongly acid urine which frequently complicates such a case. Insufflations of powdered protargol through the endoscope has proven in my hands very effective with two cases presenting local foci not cured by the nitrate solution. Both these silver salts in such strength are painful and should not be used very often. In those cases of chronic anterior urethritis due to general infection by the gonococci and in those cases presenting strictures or local foci and in all cases of uncomplicated posterior urethritis, by far the best treatment is the weekly intra-vesical irrigation with 1-4000 to 1-2000 solution of nitrate of silver, combined if need be with capsules containing either yellow oil of sandal wood, or cubebs and copaiba, using always small doses of salol. Care should be exercised in the use of the last mentioned drugs not to injure the kidneys, a watch being also kept upon the stomach and general health.

The intra-vesical irrigations are best given with Valentine apparatus, used in the treatment of acute gonorrhœa. The instrument, especially the nozzle and hand-piece, together with the lower end of the tube and shield, should always be thoroughly and carefully sterilised before and after using. This precaution should be exercised in treating any variety of gonorrhœa. About a quart of the silver solution, of the strength before mentioned is put in the irrigator and raised about 10 feet above the patient, care being taken not to elevate it so high as to produce enough force in the stream to injure the urethra. The patient is instructed to urinate and either lie down, or sit on the edge of a chair, the latter being preferable. The penis is then introduced through the hole of a small rubber apron made for the purpose and grasped with the left hand, thumb on the dorsum and fingers on the corpus spongiosum. The meatus, together with the anterior urethra is now washed, one-third of the solution being used for this purpose. The nozzle is then pressed firmly but gently into the meatus and a full stream turned on. If the urethra balloons, the patient is instructed to take two or three deep inspirations in rapid succession and to attempt immediately to urinate. The fluid will then flow freely into the bladder—one soon learns by the touch when this is taking place. When the bladder is comfortably full the injection is stopped and the patient is instructed to urinate. This seance is repeated once every 5 to 7 days, according to the special indications. The following case illustrates this mode of treatment:

On May 3d, 1898, a Mr. E., age 27, a clerk by occupation, presented himself at my office with a typical chronic urethritis, of gonorrhœal origin. Gonococci were found in the discharge. Intra-vesical irrigations of 1-2000 solution of nitrate silver, used every 4 days for 3 sittings, then every 6 days until June 3d, on which day the last seance was done. I saw him seven days after, and as there were no evidences of gonorrhœa present the treatment was not repeated and the patient was discharged cured. This is one of several cases. I do not believe he could have been cured so quickly and promptly by any other method. The intra-vesical irrigation is also of much benefit in the treatment of those cases of prostatic origin. Very often, however the passage of large sounds, or the use of Winternitz's psychrophore (the last preferred) before the intra-vesical irrigation, will produce a more rapid and efficient cure than is possible without their use.

The surgeon is very often consulted by men who complain of various sexual disorders, with a scanty urethral discharge of a milky or mucilaginous appearance of more or less persistence, together with local pains and oftentimes nocturnal emissions, or impotence. These cases may, or may not give a gonorrhœal, or excessive venery history, though very, very often they do. Melancholia and neurasthenia are frequently present. A careful urethral examination reveals nothing except possibly a slight paleness of the walls. Urinary analysis is generally negative except a slight cloudiness and sometimes a few cells from the seminal vesicles. A careful rectal examination, however, demonstrates the presence of an enlargement in the region of the seminal vesicles, generally small and cord like, somewhat doughy and more or less tender. We at once make the diagnosis chronic seminal vesiculitis. The vesicles are stripped by gently kneading them with the forefinger, per rectum, the stroke being toward the urethra. This should be done about once every 6 days, though we must be governed by each case as to frequency. The patient will pass, after this manipulation a small amount of cloudy urine. This form of treatment is the plan outlined by Fuller in his most excellent work, "Disorders of the Male Sexual Organs." The following case, selected from those which

have occurred in my practice very clearly represents that variety of this disease which comes within the scope of this paper, viz: those having urethral discharges.

Case 1.—Mr. A, E., age 26, complained of severe pain with each ejaculation. Nocturnal emissions often. Anæmic and nervous—non alcoholic. Persistent masturbator for five years following his 17th birth day. Impotence now complete. On examination I found a urethral discharge of two years standing. Rectal examination demonstrated the presence of a tender, pear-shaped enlargement above the prostate and reached with difficulty, though after a little experience this was overcome. Seminal stripping was practiced. The treatment was given weekly for 4 months, at which time he was discharged cured. Tonics were prescribed, and sound, wholesome advice given.

Case 2.—Mr. B. F., age 38, gave history of several gonorrrhœas. The present trouble continued after the last attack, 26 months before consulting me. Discharge usually scanty though at times rather profuse. *Ardor urinæ* frequently present, lasting only a few days at a time, however. General health good. Sexual functions and organs normal. Endoscopic examination of urethra showed it to be healthy. Seminal vesicles enlarged and slightly painful. Occasional nocturnal emissions and slight ejaculatory pains. Was treated unsuccessfully by several methods by as many physicians, and when seen was doubtful and rather despondent. I at once began Fuller's method of vesical stripping, and very shortly he began to improve. He was discharged cured at the end of $3\frac{1}{2}$ months.

These two cases very greatly impressed me with the importance of both acute and chronic vesiculitis, especially the latter, and in my opinion too much stress cannot be laid upon the seminal vesicles as the frequent seat of disease. In all cases of urethral discharge, of an obscure origin a very careful examination of them should be made, and even if complicated with other apparent causes they should receive prompt and careful treatment.

Epilepsy: State Institutions for Epileptics.*

By William Francis Drewry, M. D., of Petersburg, Va., Superintendent of the Central State Hospital; Member of the Commission on State Care of Epileptics, &c.

Were I to read before the Medical Society of Virginia a paper on "State Care of Epileptics," it would be as a "twice told tale," but as the matter has probably not been presented to the profession of the Carolinas, I offer that as my apology to the Virginia contingent of this audience, for again writing on the subject.

Before passing to the main object of this paper, viz: to review the progress that has been made in the matter of public care of epileptics, permit me to present, in a rather cursory manner, some observations on the history, prevalence, cause, pathology, prognosis and treatment of epilepsy.

It is a disease of great antiquity. It has probably affected mankind almost from the time our first parents were driven from the Garden of Eden. Certainly as far back into ancient times as authentic medical records go, we know it has afflicted the human race.

Euripides gives such a clear description of its symptoms, that one is convinced of his familiarity with the disease. We find mention of it in the works of Galen, Hippocrates, Celcus, Plato, Aretaeus and other renowned writers among the ancients.

The Father of medicine, though practising in the 5th Century B. C., when the whole subject of disease was wrapped up in the greatest superstition, was a man of scientific attainments. He speaks much on the order of a modern physician. Hear him on the "Sacred Disease," as epilepsy was known in that day.

"The sacred disease appears to me no wise more Divine nor more sacred than other diseases; but has a natural cause from which it originates like other affections. Men regard its nature and cause as Divine from ignorance, and wonder because it is not at all like other diseases. . . . . They who first referred this disease to the gods appear to me to have been just such persons as the conjurors, purificators, mountebanks and charlatans are now. Such persons, then, using the divinity as a pretext and screen for their own inability to afford any assistance, have given out that this disease is sacred, adding suitable reasons for the opinion, and they have instituted a mode of treatment which is safe for themselves, namely, by applying purifications and incantations, and enforcing abstinence from baths and many articles of food which are unwholesome to men in disease. This disease is formed from those things which enter into and go out of the body and it is not more difficult to understand and cure than the others, neither is it more Divine than other diseases. . . . . Men ought to know that from nothing else but the brain come joy, despondency and

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lamentation, and by the same organ we become mad and delirious."

In the New Testament we read descriptions of epilepsy as well as insanity. A troubled father pleading for mercy for his afflicted son, says, "For ofttimes he falleth into the fire and oft into the water." Some authorities believe that the "thorn in the flesh," which was a source of so much anxiety to St. Paul, was epilepsy. Among the ancient Romans it was a disease of much ill-omen. In fact, all along down the centuries, this dreaded malady was generally regarded as a mysterious manifestation of the Evil Spirit. The most absurd theories regarding its cause and treatment, were advocated by the highest authorities of their time. To "stay the mysterious spell" all manner of ridiculous remedies were prescribed. For instance, a decoction made from the skull of a dead man who had met a violent death, was regarded as a "specific." Snake heads steeped in rum, was a favorite prescription. The Romans thought the drinking of human blood from a recent wound, an unfailing remedy.

It was not until Marshall Hall advocated the theory of reflex irritation that any progress was made in the knowledge of the disease. Later on came Hughlings Jackson, with the belief that the convulsive seizures were due to an explosion of nerve force in the higher cortical and sub-cortical brain centers, caused by nutritional disturbances.

Haig, in his recently published researches, demonstrated the close connection of attacks of epilepsy with variations in the excretion of uric acid. "Here and there in literature," says a distinguished writer in the Alienist and Neurologist of October, 1898, "opinions have been expressed that the probable cause of many nervous symptoms is to be sought in an intoxication or auto-intoxication of the organism."

Notwithstanding some of the most eminent neuro-pathologists have given special study to this disease, we are yet without accurate knowledge of a definite lesion upon which may be based rational treatment. As long as the etiology and pathology are so obscure, treatment must of necessity be more or less experimental.

Van Gieson, chief pathologist at the New York State Pathological Institute, writes in a recent number of the "Archives of Neurology and Psychopathology," that, "All the facts which the pathological anatomist and physiological chemist have gained in the study of this dire malady, give no explanation of the *process* that gives rise to the epileptic phenomena." He deprecates the use of bromides in the treatment of epilepsy, believing that in many cases its administration on this entirely empirical basis, although relieving the symptoms, may damage the nervous system severely.

As to the curability of true epilepsy, I am decidedly skeptical. It is practicably incurable. I have, of course, seen cases in which the convulsions stopped for some considerable length of time, as long in some instances as 2 years. I have also seen many cases improve under this or that line of treatment. There are doubtless some cases, particularly in children, in which by the removal of the reflex cause, if that can be discovered, the disease is arrested or cured. While brain-surgery has probably accomplished a few permanent cures, it is a procedure that can be adopted in only a limited number of cases.

Taking all cases—reflex, traumatic, and the so-called idiopathic—probably not more than three or four per cent. are permanently restored, it matters not what line of treatment may be adopted.

During the past ten or twelve years I have tried, in quite a number of cases, about every drug that has been recommended as useful in the treatment of epilepsy, and I am still experimenting, but I have little faith in the efficacy of any known medicinal remedy in curing this fearful disease.

As to what constitutes a cure in epilepsy, it is an undetermined matter. In a paper on "Remissions in Epilepsy, &c.," read by Dr. Wharton Sinkler before the American Neurological Association, in May, 1898, that distinguished neurologist reviews the literature on this subject, citing the opinions of different writers. Various observers report cases in which there were long intermissions of attacks. Almost invariably there was, sooner or later, a recurrence of the fits. Gray is undetermined as to what may be considered a cure. Dana claims that 5 to 10 per cent. gets well. Ross says a few cases are cured. Nothnagel considers epilepsy a curable disease, 4 or 5 per cent. getting well without treatment. Hamilton regards the disease as curable. Niemeyer says recovery is rare. Yet none of these authorities define what is rearly meant by a cure. Sinkler reports 24 cases of idiopathic epilepsy, in which there have been remissions varying from two years to twenty-nine years. He closes his interesting article in these words:

"After consideration of the cases above referred to, in which after prolonged intervals, even as long as twenty-nine years, there has been a recurrence of the disease, we are forced to the conclusion that it is not justifiable to consider any case of epilepsy cured, no matter how great has been the interval of freedom from attacks and ap-

pearance of normal health. Notwithstanding this unfavorable conclusion, the study of these cases brings out a fact which is satisfactory, for it shows that remissions of many years' duration may occur, in which the patient is in normal health, and is able to pursue his life, as if he had never suffered from epilepsy."

What effect epilepsy has on the mind is an important question. Certainly it has a marked influence on the mental development of children, frequently leading to idiocy. The frequent violent explosions of nerve force must arrest or retard mental evolution.

There can be no doubt that epilepsy leads, in many instances, to mental and moral degeneracy. Dementia is frequently preceded by epilepsy of long standing.

It is, however, a difficult matter to give with any degree of accuracy the proportion of epileptics that become insane. Eight or ten per cent. of all insane persons have a history of epilepsy.

Dr. Frederick Peterson believes that less than ten per cent. of epileptics become insane. Dr. J. H. McBryde, however, is of the opinion, "That, with rare exceptions, habitual epileptics suffer sooner or latter from some degree of mental impairment."

The Journal of the American Medical Association, in concluding an editorial in its issue of Dec. 3d, 1898, regarding the difference of opinion of these two equally eminent authorities, says: "It may be said that it requires a rather broader conception of insanity than is commonly admitted to apply it to epileptics generally, or even to all the chronic cases in their later development. They are unfortunates, to some extent mentally impaired in a large proportion of cases, but it is as easy to over-estimate the frequency of such defect as to under-estimate it."

At any rate, the mental capacity of an epileptic may vary from that of the highest order of genius to that of a complete imbecile. Napoleon, Julius Cæsar, Petrarch, Peter the Great, Handel, Swift, Richlieu, Marleborough, Weltington, Mahommet, are among the geniuses of the first order who were subjects of convulsive seizures or epilepsy.

That the disease is to a marked degree hereditary, is generally admitted. The offspring of an epileptic may be idiotic, insane, morally deficient, or otherwise degenerate.

In New York and Connecticut the transmission of the disease is considered of serious enough import to influence the taking of steps looking to the enactment of a law forbidding the marriage of epileptics.

Now let us study the epileptic as an individual, as an element of the community.

Owing to the distressing nature of his malady, he is almost an outcast from society. On account of it he is debarred from enjoying equal advantages with his more fortunate fellow-beings. Deprived of opportunities of acquiring an education or a trade, he grows up in more or less ignorance. Denied social enjoyments, church privileges, &c., he lives in discontent and selfishness. His lot is indeed a hard one. Rich or poor, old or young, his life is beset with trials of a most aggravating nature. No one likes to employ him in his store, office, factory or elsewhere, for fear he may have an epileptic attack while engaged at his work. The fact that he has fits causes him to be shunned and neglected. Can there possibly be anything more mortifying than to be seized with a fit and thus made the object of a group of curious spectators? In a public assemblage can there be anything more appalling than a person in the convulsive stage of epilepsy? An object of never-ceasing anxiety, an unconcealed skeleton in the household, he is a menace to the happiness and comfort of the family. For obvious reasons it is impossible to give him proper attention at home.

Many families, in which there are epileptics, are poor and absorbed in struggles for a livelihood; consequently, the care of a dependent who contributes almost nothing to his support, becomes a grievous burden. Indeed, the presence of an epileptic in a family often means the withdrawal from the ranks of wage-earners, of two persons—one the epileptic himself, and the other the person who is responsible for the care of his unfortunate charge.

From a medico-legal point of view the epileptic is an uncertain and dangerous element in our midst. Frequently he is temporarily deranged after a seizure, and at times may commit homicide or other crime. The mental aberration may vary from the slightest deflection to the most profound dementia or furious mania. The epileptic dyscrasia manifests itself in various ways. No one can tell when or how a sudden impulse may seize the erratic victim of epilepsy. There can be no denial of the fact that, owing to the protean manifestations of his malady, the epileptic has committed some of the most revolting crimes.

It is clear, therefore, that certain safeguards should be thrown around these unfortunate creatures, both for their own sakes, and in the interest of the public peace and welfare.

Reduced to poverty and want, and having nowhere else to go, many epileptics, including children, drift into the almshouses,

where they are forced, in many instances, to associate with degraded humanity of every kind. These local institutions are without means for the suitable care, treatment and employment of this class of patients. It is objectionable to many epileptics to associate with the average inmate of a poor house; and, on the other hand, no other class of people so demoralize the entire administration of the poor house as do epileptics, who are, as a general rule, irritable and hard to please.

Long and almost criminal neglect has sent many an epileptic to the hospital for the insane. Frequently they are pronounced insane when they are not, and forced to go to the asylum—an unsuitable place for them. Certainly the defective commitment law of Virginia has caused many a sane epileptic to be confined in a jail or a hospital for the insane. To convalescent insane patients particularly is the presence of epileptics harmful,involving a great danger of relapse in their mental disease.

The aspect of a patient in an epileptic paroxysm is shocking to witness, and the sight has been known to induce a similar attack in an onlooker. On the other hand, association with the insane, tends to aggravate the disease of the epileptic and to make him more irritable and unmanageable.

During the past few years I have endeavored to ascertain as accurately as possible, from available data, the number of epileptics in my own State. I do not think it an over-estimate to put the number at 3,000. The usually accepted ratio in this country is 2 per thousand of the general population. In North Carolina, then, there are about 2,500, and in South Carolina, say 2,000 epileptics. These figures are, of course, approximate.

They are to be found scattered throughout our land, in private homes, jails, poor houses, asylums, etc. But wherever they are they are discontented, unhappy and full of evil forebodings, and lead more or less miserable lives.

View the matter in any way you will, there can be but one conclusion: The average indigent epileptic is sadly in need of a home, hospital or colony, where he can be cared for in a humane manner, and have his disease studied and treated in accordance with the most scientific methods. But this is not all the epileptic needs. He needs employment both of mind and body. This can be provided nowhere as well as at an institution equipped especially for him.

That the public conscience has, to a great extent, been aroused to the needs of epileptics is evidenced in the number of institutions which have already been opened to them.

Credit for the first effort made in the care of epileptics in a special institution is due a Frenchman by the name of Pasteur Bost, who, in 1848, opened an industrial home in Southern France for a few patients. In 1869 the now celebrated Bielefeld Colony for Epileptics began on a very small scale. To-day this colony, one of the greatest charities in all the world, has nearly 1,500 epileptics comfortably living in homes on 1,400 acres of land, where they work and enjoy the ordinary pleasures and privileges of life like other people, and, at the same time, receive the best possible medical treatment.

But let us review what has been done in our own country along the lines of humane care of epileptics.

It would be too long a story to tell of the persistent efforts on the part of public spirited citizens and philanthropists to induce the Legislatures of various States to recognize the needs of these unfortunates. Nor would it be a short story to tell of the successes attained here and there in the way of small institutions established and maintained by local charity organizations and philanthropic individuals. I propose, however, to give results and not the laborious efforts by which the results were accomplished. The first private charity institution for epileptics in this country was established at Baldwinsville, Mass., in 1882. It still exists and is doing a grand work for epileptic children. There are several other private institutions for such patients, but we will pass on to accounts of the public institutions.

The first State institution built exclusively for epileptics was in Ohio. In 1879 the Legislature of that State seriously considered the matter, but not till 1890 was a law enacted providing for the establishment of a hospital for epileptics—sane and insane—to be located at Galipolis. On November 30, 1893, the institution was opened for the reception of patients. It had capacity at that time for only 250 male patients. September 1st, 1894, cottages for 200 females were completed and at once occupied. The buildings now consist of twelve or more cottages, with from fifty to seventy-five beds each; one cottage for the insane with capacity for 200 patients; one large industrial building, equipped for mechanical pursuits of various kinds, one kitchen, two congregate dining-rooms, one bakery, one laundry, one building for cold storage and manufacturing of ice, and such other buildings as are necessary at a large establishment of the kind. Other buildings, such as a chapel, an amusement-

hall, a hospital for the sick, &c., will soon be constructed. $455,000.00 have already been expended in construction. The farm attached to this institution consists of several hundred acres of land. At this time there are nearly nine hundred patients being treated there. On a visit to this institution in the spring of 1897, I was deeply impressed with the humane and scientific work that was being done there. Nearly all the labor about the cottages, laundry, kitchen, &c., was being done by the patients. Many of them were engaged in grading, excavating, quarrying, building, planting trees and flowers, attending to stock, gardening and farming. Others were making brooms, baskets, mattresses, repairing shoes, etc. In short, there was a systematic effort to provide some healthy occupation for all who were able to work. A school for the children was flourishing, and already proof had been given of its usefulness as a means of improving the physical, intellectual and moral condition of the little patients. Outdoor sports, in-door games and amusements, religious services, Sunday school,letc., added to the comfort and welfare of the inmates. A spirit of contentment and good feeling seemed to pervade the hospital. The patients appeared to appreciate the beneficent results of the humane and, in a measure, curative treatment they were receiving for their hitherto irremediable malady.

I was told by Dr. H. C. Rutter, the able Superintendent, that marked improvement in the physical and mental condition of the patients had been noticeable with each recurring year. Under the skillful treatment patients were receiving there the number of epileptic seizures had decreased more than 300 per cent., and had become of a very much milder character. About 6 per cent. of those treated have been discharged recovered. No case is pronounced cured until two years have elapsed since occurrence of the last paroxysm.

New York was the second State to recognize in a substantial way the requirements of epileptics. After years of patient and persistent efforts on the part of the advocates of State care of dependent epileptics, the Craig Colony, for *sane* epileptics, modeled in great measure after the noted Biele. field Colony, was a reality.

In 1894, by legislative enactment, $140,000.00 was appropriated to purchase property and provide accommodations necessary to begin the colony. An estate comprising nearly 2,000 acres of land in Livingston county was selected. Located in the great Genesee valley the farm is fertile and well watered; contains 700 acres of original growth walnut, maple, hickory, oak, pine, and other hard woods useful for manufacturing purposes. Having on it a number of old buildings formerly used by the Shakers (for they were the owners who sold the property to the State), it was not a difficult matter to repair and remodel enough of them to provide for a goodly number of patients. In February, 1896, the colony was formally opened and soon 200 epileptics were comfortably domiciled there in home-like cottages, with beautiful gardens and grounds attached, given suitable employment, and placed under humane and scientific medical treatment. The Legislature, seeing what a humane act it had been to establish the colony, appropriated, in 1896, $75,000.00 more for the construction of new buildings, including a hospital for acute medical and surgical cases, etc.

In 1897 an additional appropriation of $126,000.00 was secured for the purpose of constructing administration buildings, houses for employees, and enlarging the facilities for carrying on the various industries which had been established there for the benefit of the patients.

From a recent article written by Dr. W. P. Spratling, the energetic Superintendent of the colony, I glean some facts which are interesting, and shows that the colony is rapidly developing into an ideal institution for the treatment of epilepsy and the care of epileptics. During May, of last year, there were 270 patients—148 men and 122 women—distributed in a number of houses dotted here and there over the beautiful grounds which had been carefully laid out in accordance with a general scheme of development for landscape gardening, etc.

The last legislature appropriated a considerable sum to be used in constructing additional buildings, including cottages for patients. Each cottage will be a home in itself for twelve to twenty-four patients, and one or two servants, and will have its own kitchen, dining room, etc. Separate buildings for children will be constructed, each containing a school-room, a kindergarten, a sitting room, a play room and a work room.

One visiting this great institution, which it was my pleasure to do in 1897, is at once forcibly impressed that it is the purpose of those in authority to make it not only equal but superior to the German colony. One sees all around him evidences of its industrial and educational features. Forty or more men are employed daily in the industrial buildings, consisting of a carpenter, blacksmith, upholstery and general repair shops, a printing office, &c. The farm and garden, cultivated almost exclusively by the patients, are sources of considerable reve-

nue, besides being of marked benefit to the patients employed thereon. It is the purpose of the managers to produce chiefly through the labor of the epileptics, everything that is consumed at the colony. For instance, all the beef, mutton, cereals, chickens, eggs, milk and other foodstuffs are products of the farm- All the vegetables used there are raised in the Colony gardens. The ratio of earnings of the patients to the cost of their maintenance is already over 50 per cent. During April, 1898, 75 per cent. of all male patients, and 81 per cent. of all female patients, were employed at some useful labor, at the rate of 6 to 8 hours a day regularly. The men were employed in the various out-door occupations, in the shops, &c., and the women in the laundry, sewing-rooms, in the kitchens, as waitresses, assistant nurses, &c.

Dr. Spratling says: "It has become to be a well recognized principle in the treatment of epilepsy that systematic employment possesses genuine and distinctive merit, and the necessity for making ample provision for the employment of all patients at the Colony was early recognized, and as far as possible carried into effect."

At both the Ohio Hospital and the New York Colony the aim is to treat the individual. The medical, dietetic and moral treatment in each case given special attention. Investigations into various methods of treatment are being constantly made, and the use of any remedies that hold out the least promise of benefit are given patient trial and results noted.

The reported recovery rate at the Craig Colony is about what it is at the Ohio Hospital, viz., 6 per cent. of all treated.

A training school for nurses especially for epileptics has been started at the Craig Colony, which will prove a valuable adjunct to the medical department. The nurses are taught cooking in all its branches, for among the means of treating epilepsy, a proper dietary is one of the most important. Lectures on the science and art of housekeeping are included in the curriculum.

The Ohio institution has a pathological laboratory, in which original research in epilepsy is prosecuted under direction of a skilled and scientific expert in that line. At the Craig Colony a laboratory is in course of construction, which, when completed, will be a model in every respect.

Doubtless valuable information regarding the pathology, etiology and treatment of epilepsy will emanate from these great centers of observation and study.

In 1895 the Legislature of Massachusetts passed an act providing for the establishment of a State Hospital for Epileptics, on the site of the old State Primary School at Monson. The hospital has been opened for some months, and is authorized to receive, (1) epileptics from the Insane Hospitals, (2) those who may be legally committed, (3) voluntary sane epileptics, who may be detained for a limited period; but only adults who are not criminals, idiots, inebriates or violently insane can be received.

The California Legislature, during its session of 1897, authorized the establishment of an epileptic colony, for the accommodation of about 500 patients, to be transferred from the various hospitals of the State. Already over 500 epileptic children are being cared for at the Hospital for children at Eldridge.

Michigan has a public institution for epileptics, conducted on the industrial plan.

The generosity of liberal individuals, notably Henry C. Lea, of Philadelphia, together with the aid of the State, made the Oakbourne Colony for Epileptics in Pennsylvania a possibility. "It is," says the Medical News, "an undertaking which, from its humane basis and its eminently practical results, must meet with the sympathy of every one interested in the welfare of this unfortunate class in the community and that such results outweigh the cost of the monetary outlay is conceded by all students of sociology."

The advocates of the public care of epileptics in the State of New Jersey, being of the ever-active, progressive kind, did not let a failure three years ago (when the Legislature passed an act providing for the establishment of a colony, which for economic reasons was vetoed by the Governor), discourage them in making another attempt. A few weeks ago the Legislature of that State passed a bill, which has been approved by the Governor, having in view the establishment of an "epileptic village." $15,000.00 was appropriated for the purpose. Already a farm, not far from Trenton, consisting of 200 acres of land, with several buildings thereon, has been purchased. The institution will be opened within a few months for the reception of patients.

In various other States efforts are being made to have colonies or institutions of some kind established for the exclusive accommodation of epileptics.

Last year the lower branch of the Legislature of Kentucky voted favorably on a proposition to establish an Epileptic Colony in that State, but the bill came up in the Senate too late in the session to be voted upon. The friends of the bill fully expect to see it passed by the next Legislature.

In Virginia the question of establishing

a colony has been agitated, off and on, during the past five years. Public sentiment favorable to such an institution is undoubtedly growing.

In 1895 the Virginia State Medical Society, urged upon the Legislature the importance of this humane project. During the session of the General Assembly of 1895–96 a Commission was appointed to look into the matter of State care of epileptics, &c. The Commission set about its task with enthusiastic interest, and after making a thorough investigation into all phases of the subject, visiting the institutions in New York and Ohio, in search of information, submitted a report, which concludes substantially as follows:

1. Every principle of justice and humanity is in opposition to the indiscriminate commingling of epileptics, the insane and paupers of every class in the same institution. Neither the Hospital for the Insane nor the poor house is a suitable place for a sane epileptic.

2. As a rule, epileptics in private families are deprived of the ordinary advantages of making a support for themselves, of acquiring an education, or of enjoying the usual privileges and pleasures of life, but on the contrary, are a heavy tax upon other individuals.

3. It would ultimately be in the interest of public peace and economy if the State would assume charge of all indigent epileptics, and provide suitable means and ways by which at least many of them could contribute to their own support.

4. One of the State Hospitals should be utilized, in part at least, for the care of all the insane white epileptics of the State, thus leaving the two other hospitals for the accommadation of all white insane persons who are not epileptic. At the hospital selected for the insane epileptics suitable buildings should be set apart exclusively for this class of patients, so that their diet, employment, medical treatment, etc., could be regulated in the proper manner, which is impossible to do when they are commingled, as at present, with other patients. This policy has already been adopted at the Central Hospital at Petersburg, where all the female epileptics occupy a separate building. This segregation has proven to be a benefit to both the epileptics and the non-epileptic insane of this institution.

5. A colony, modeled, in the main, after the Craig Colony in New York, should be established in this State for *sane* epileptics. Separate accommopations should of course be made for the negro epileptics. There should be procured, either by purchase or by long time lease, a tract of fertile, producsive land, say of 1,000 acres, in a healthful region, with an abundant supply of pure water, good natural drainage, and means for the ready disposal of sewage. The location should be near some large town, and easy of access from all sections of the State. Having selected such a site, the colony should begin on a small scale and be gradually developed in a way that would seem best adapted to the needs and requirements of the class of patients for whose benefit it is established.

6. In the beginning there should be only a few plain, inexpensive cottages for the accommodation of, say, 100 epileptics and the required officers and employees, and necessary out-buildings. Workshops and other buildings for various trades and industries, hospital for the sick and infirm, hall for recreation, chapel, school house, etc., should be built later on as the colony develops. Farming, gardening, stock raising, fruit culture, etc., should be prominent features in the beginning. Mechanics among the patients would aid materially in developing the institution on the industrial line.

7. Incalculable benefit would be derived from the school for educating the children, as other children and young people, and from the shops in teaching many of the beneficiaries trades and industrial occupations. Indeed, many would be enabled, under proper supervision, to support themselves entirely while under treatment in such a colony. The labor the patients would do, such as working on the farm, in the shops, stock raising, etc., would eventually make the colony self-sustaining to a great extent.

8. The collection of a large number of epileptics in such an institution, under the treatment of a well equipped and organized hospital corps, together with a pathologist, would afford opportunities for a scientific study of this widely prevalent disease, which would eventually lead to a greater knowledge of its nature and cause, hence, more satisfactory results from treatment. Under skilled medical and surgical treatment combined with suitable diet, labor and hygienic regulations, a goodly number would be restored or at least improved sufficiently to go out into the world and earn a living for themselves.

9. The colony should be managed by a board of directors, composed of five members, to be appointed by the Governor, by and with the advice and consent of the Senate, and the term of office for each member should be five years.

10. The board should appoint as superintendent a skilled physician, whose term of office should not be less than six years. They

should also appoint the other necessary officers, fix their terms of office, salaries, etc.

11. The directors should be permitted by law to receive any gift or bequest of money, or any donation to be applied, principal or interest, to the erection of buildings, to the support or education of the patients, or to the general use of the coiony.

12. The expense of establishing and equipping the colony should be borne exclusively by the State, but its maintenance should be paid for in part by the various counties and cities sending patients there, say $40 per annum for each indigent patient.

13. Pay patients should be admitted on terms to be regulated by the board of directors.

14. The commitment of pay patients should be voluntary on their part. Indigent patients should be commited by county or city authorities upon certificate of a reputable physician. The number of patients receiving benefit from the colony should be proportioned among the several cities and counties. At first, as many as practicable should be taken from the poor houses, hospitals for the insane, etc.

15. From a list sent by the local authorities, the board of directors and superintendent should select such cases as, in their judgment, would be most suitable for residence in the colony. The object of this would be to prevent the crowding in of helpless patients who could be of no service in developing the colony.

Finally: While we believe there is urgent necessity for such an institution as we have outlined, we think it would be the part of wisdom in establishing a radically new charity, to carefully consider every step; therefore, we would recommend that the General Assembly appoint, or authorize the Governor to appoint, commissioners whose duty it shall be to pursue these investigations further, get options on various sites, submit plans, estimates of cost, and furnish such other information as may be desirable, or necessary to give the Governor and the Legislature full information preparatory to establishing an epileptic colony for the humane, scientific and economical treatment and care of epileptics.

The Commission is composed of Dr. Geo. W. LeCato (State Senator) of Accomac county, chairman; Hon. William P. McRae (ex-member House of Delegates) of Petersburg, Charles V. Vawter (Superintendent Miller Manual School) of Albemarle county, and Dr. William F. Drewrey (Superintendent Central State Hospital) of Petersburg, Col. J. Bell Bigger, of Richmond, Secrrtary.

The report of the Commission was most favorably received by the Legislature, and I have not a doubt that in a few years an Epileptic Colony will be established in Virginia.

The Advisability of Bone Suturing in Treatment of Fractures.†

By Hugh T. Nelson, M. D., Charlottesville, Va.

The above subject having been treated at great length by numerous writers may to the hearer appear hackneyed, yet, as one meets in all walks of life persons who are awkward cripples as the result of fractured bones (some dating long years since) there would appear something left unsaid or unlearned.

Scrutinizing attentively one is apt to conclude, without reflection, that the fault lies with the physician or surgeon treating the case; yet there are few of the above, even of much repute, who have not frequently failed in their earnest efforts to prevent deformity, greater or less, as resulting from fracture.

This is equally true of fractures of the shafts of long bones as of fractures of the joints. To attribute the deformity following fracture to bad surgery or incompetent surgeons, is by no means just or fair, for in a preponderance of cases this lies with the patient or methods persued by his surgeon; the which having been inculcated through supposedly wiser minds, in the acquiring his profession, he honestly pursues. It is of small moment to blame men for following great teachers, saying they should for themselves devise better means for accomplishing desired and desirable ends, provided those already in vogue are not in their hands capable of producing satisfactory results. Nor should it be said that the failures of physicians and surgeons to prevent excessive deformity and loss of function is due either to lack of comprehension of the forces involved in producing such deformity, or ignorance of the proper manner of using those mechanical appliances already devised in such numbers as to maintain proper apposition of severed fragments. In a large number of cases of fracture excellent, even perfect, results are arrived at by using any of the special appliances depicted in the text-books on the subjects, or those advertised in the "Surgical Appliance" Catalogues of the country. Yet these same appliances not infrequently fail of accomplish-

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ment in the skilled hands of those who devised them.

Fractures are often treated without a proper knowledge of those natural laws involved in producing that deformity almost always seen in a recent untreated case. To undertake the appliance of any kind of mechanical contrivance while yet ignorant of natural laws or the ways of overcoming the forces producing displacement of fragments is a sign of inefficiency and lack of intelligence. As above stated, there are yet some cases of fracture where deformity not infrequently results however well the surgeon weigh the conditions maintaining and applies his apparatus, using natural science as a guide.

Simple fracture of the leg or forearm will with the most primitive treatment, yield good results, provided the joints are not involved; but badly comminuted fractures, even in good localities, so to speak, frequently give untold trouble and the physician has often been mortified by his results although the work has been carefully and scientifically done. It is not to be intimated that there is any method by which all fractures, even those which at first attempt at reduction appear of slight moment, can be cured without deformity. For the most unlearned must see that a certain class of fractures if cured at all can only be so done at the expense of changed shape and impaired usefulness.

In this paper an exhaustive treatise is not attempted: the only effort made being to indicate what has seemed to the writer feasible methods of treating those fractures which are so often cured with deformity and impaired usefulness. The *broad statement* is here made that fractures take place in many portions of the skeleton and under many conditions, intrinsic or extrinsic, in which satisfactory results, without or with minimised deformity, are only attainable by *suturing together* the several fragments. Also, that in many cases such procedure instituted immediately after the accident should be done as a routine method both in order to save the patient valuable time as well as lessen the fatigue and suffering incident to other methods of treatment.

The citation of a few cases will best serve to illustrate that class of fracture where this method of treatment is imperatively demanded.

Case I.—Olaff Carrlsohn, employed with a force of hands working on an Iron bridge slipped and fell into the bed of a stream about eighty feet below. His fall was broken by both thighs striking on an iron girder situated some twenty feet beneath the position occupied by him. The long axis of the body must have been at the time of impact nearly if not quite at right angles to the iron girder. Brought to the Piedmont Hospital, of Charlottesville, and stripped of his wet clothing, he was found to be of powerful development, in the full vigor of early manhood—but with comminuted fractures of both femora, in the right limb just *above* the knee joint, in the left immediately belowthe junction of the lower and middle thirds. He was carefully measured and two anterior splints, as devised by our distinguished surgeon, the late Nathan R. Smith were, under anaesthesia, applied. So soon as recovered from the effects of this last the patient became comfortable and seemingly did well. These splints were kept on for four weeks; upon their removal the left femur was found the seat of vicious union, while in the right there was no union whatever, the bone fragments being flexed strongly on the leg with the upper extremity almost piercing the skin. The shortening of both limbs was decidedly marked, but owing to the double deformity progressing synchronously it had escaped notice. Dr. A. M. Phelps, of New York, saw the patient at this juncture and expressed the opinion that the lower fragments of both femora were so short that no form of mechanical appliance could counteract the combined action of the Solei and Gastroctnemei muscles and prevent them from dragging these fragments backwards. He, however, suggested a refracturing of the left femur and advised the putting up of both in plaster splints, maintaining a greater degree of flexion than formerly used. The patient was accordingly anæsthetized, the limb fractured and the bandages applied by Dr. Phelps. For three weeks the patient apparently did well, and was very comfortable. Now he complained of a burning sensation in the right thigh behind the seat of fracture. A trap was cut in the plaster and the upper end of the lower fragment was discovered protruding through the skin. Removal of the pressure relieved this pain and at the end of another week both casts were removed. The left thigh was found much shortened, with some deformity backwards, with of course no union in the right. As the only means of saving this limb bone suture was then determined on and the writer under aseptic conditions made, two long incisions, one external, from just above the upper border of the external tuberosity,and the other parallel and opposite, in the right thigh. The limb had previously been rendered bloodless. The incisions were deepened, and a wedge shaped piece of bone, one and one-half inches long posteriorly, and one-half inches long anteriorly, and in-

volving the entire shaft of the femur was found entirely separated from the two other fragments and removed. The remaing fragments were sawn perpendicularly across, their surfaces approximated and a hole bored in each fragment from without inwards. Through the orifice in the lower fragment a piece of iron stovepipe wire, which had been previously burned in an alcohol flame, was passed from without inward, bent at right angles, inserted through the hole in upper fragment from within outwards and shouldered after being drawn taut. The two ends of wire were now twisted together, turned over and the cork screw shaped iron hammered down into the shaft of the bone. This had been done after the periosteum had been dissected from the edge of each fragment in order to give a good field for work. The parts were now thoroughly irrigated with mercuric chloride solution, the surface of the wounds approximated and held together by long pins—such as ladies use in fastening on their hats—and a figure of eight silk thread thrown around them. Drainage tubes were inserted in the wound and an ample soft dressing applied. A plaster cast was then adjusted over this, the limb being in extension. The operator felt satisfied that the combined action of all the muscles of leg and thigh would fail in disturbing the relations of those fragments. A photograph taken a year afterwards disclosed the following result: The man is shorter than before the accident, by two inches-and-a-half, but as strong and as perfect in physical health as ever. The deformity in the left limb is considerable, but the shortening in each is the same. The shortness of the lower fragment could not in this case have been combatted,and Bucks extension would only have dragged the lower fragment away from the middle one and the flexion at the knee joint would still have maintained. In fact, this method was tried after removing the first plaster splint referred to above. In this case the suggestion to suture was made by Dr. Phelps. The operation owing to the close relation of the fragments to the great vessels and nerves at the upper portion of the Popliteal space, of extreme difficulty, so difficult in fact that but for the kind sustaining and assistance of the late Dr. Wm. B. Towles, the operation would have been abandoned and the limb sacrificed.

Case II.—George Washington, 26 years of age, resident of Greene county, Virginia, was seen by the writer after having been shot through the right thigh at the junction of the middle and upper thirds. The load of small shot, fired at short range, passed into the anterior aspect of the thigh, just external to the femoral vessels, comminuting the shaft of the femur and lodging under the skin, immediately posterior to the wound of entrance. More than one inch of the bone was driven back and finely comminuted. The big burly negro when first seen, had been wounded about thirty-six hours and the wound was undoubtedly already infected. A counter opening was made, a number of shot, several bits of cloth and fragments of bone removed, the wound aseptically dressed, a long splint applied and the man brought for further treatment to Charlottesville, a distance of more than twenty miles. Suppuration set in very profusely, so only such attempts at immobilization of the limb as consistent with cleanliness were attempted. Efforts were futile, so attempts at immobilization, except for sand bags wrapped in rubber cloth, were stopped and the wound simply kept clean. Suppuration was reduced to its minimum in about two weeks, and then notwithstanding there existed a sinus leading down to the bone an attempt was made to get union. Hamilton's long splint was employed, no union resulted; immobilization by plaster with a trap immediately over the fistula was for six weeks attempted, still nothing but a movable condition prevailed. Finally operation *number* one was resorted to. The man, one year afterwards, was doing full work, in excellent health, but with an unavoidable shortening of between two and three inches of his injured limb. Necrosis of the injured ends of the fragments prevented any union, and although it was supposed the saw had removed all necrosed bone, suppuration set in after the wiring. Hydrogen di oxide, full strength, soon controlled this and recovery was complete. Except for this method of treatment he would to-day be stumping about on one leg or else carrying with him a dangling, useless limb, necrotic—if not tubercular.

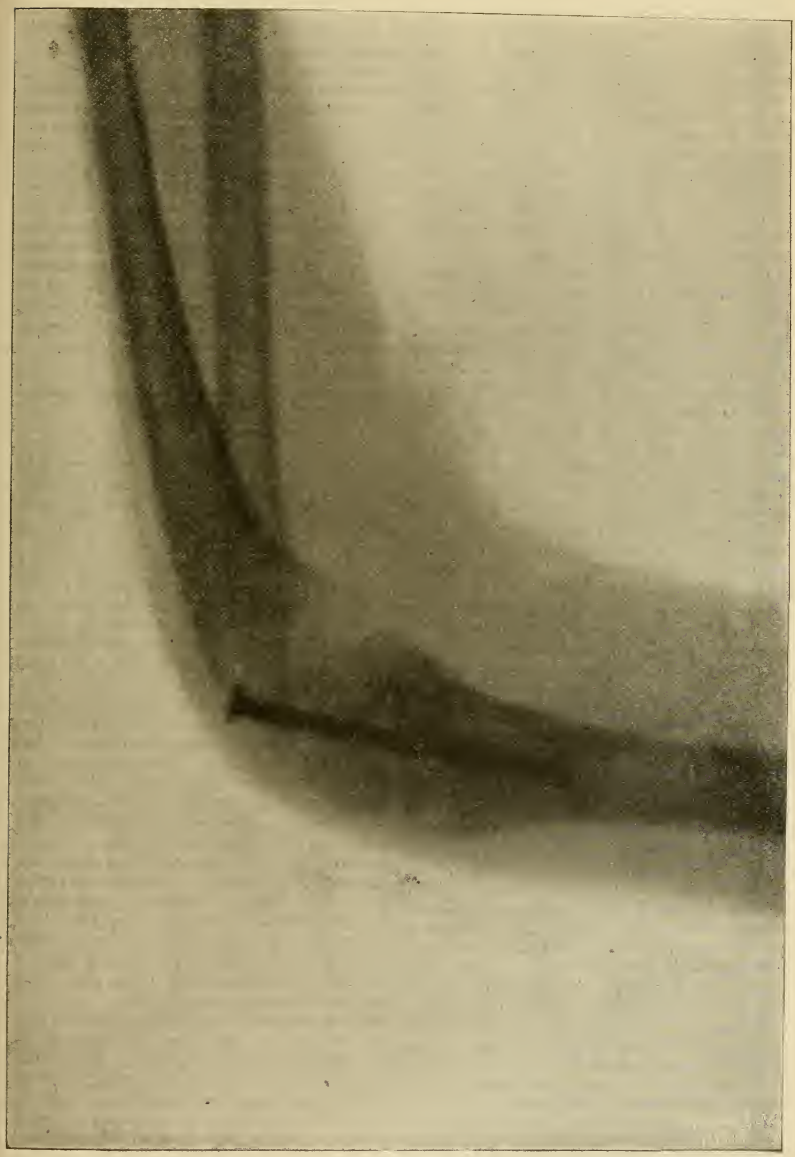
Case III.—Richard Turner, aged 18, engaged in digging a well, slipped and fell 42 feet, sustaining compound comminuted fracture at junction of the middle and upper thirds of right femur. He was brought to the Dispensary of the University of Virginia about six hours after the accident. Fracture was tempoarily put up in boards, and the day following a plaster bandage, extending from foot to groin, was applied, and completed with a spica of same carried around the body. The patient became comfortable and seemed doing well. This dressing was kept on 25 days. On its removal the fragments were found not in apposition, one was lying almost transverse the axis of the limb and on its external aspect protruding nearly through

the skin. An X-rays picture was taken and here shown. The weak battery renders very imperfect, but serves to show the state of the fragments. Two days after the above, the patient having been carefully prepared for operation, the loose piece of bone was removed through an excision made on the external aspect of the thigh. The piece removed involved about half the cylindrical aspect of the femur, was two and three quarter inches long and larger at its upper extremity. It was lying almost at right angles to the axis of the femur and was surrounded by muscular fibre and formative tissue. In addition to this the upper fragment was pulled forwards and upwards, while the ends of both were in a condition of incipient necrosis. Squaring these ends necessitated a shortening of the limb to the extent of no less than three inches; it was, therefore, determined to suture the fragments as they were, placing a steel dowelling pin in the marrow cavity, thus maintaining immobility. The two fragments were now sutured together with a stout silver wire prepared for the purpose, while a steel rod six inches in length and three-sixteenths of an inch in diameter was placed in the marrow cavity, allowing a projection of an inch and a half into each cavity, and leaving nearly three inches exposed to the periosteum, which had been dissected off the fragment that had been removed. Thorough antiseptic dressing and a drainage tube were employed, and the limb put up in a Hamilton's splint. This dressing remained six days and the limb was again dressed and put up in plaster. Conditions seemed satisfactory but for the continual suppuration from the fistula, which necessitated the making of a tray for purposes of cleanliness. This cast was allowed to remain twenty-seven days before removal, when good union in good position was observed—a large amount of callus maintaining on the inner aspect of the bone. The fistula being probed it was found to lead to the marrow cavity, and the dowelling pin could be distinctly felt by the probe. A stout cast was then applied from tuberosities to trochanter-major, and tuberosity of ischium, and patient put on crutches. Eighteen days later this cast was removed, good union was found, but large amount of callous and necrosis. The X-ray photograph demonstrates the condition. Hereafter the necrotic bone will be removed and if necessity demand, the dowelling pin also.

Case IV.—Willy Payne, a white lad of ten years of age, fell from a tree and sustained a compound comminuted fracture of right humerus at the junction of the lower diaphysis with its epiphysis, the lower fragment of the bone being finely comminuted as regards the internal condyle, while the external condyle was intact, although severed from the shaft. The patient had also suffered a fracture of right radius at the junction of lower and middle thirds, a Collis fracture, and dislocation of the radio-carpal joint. A four inch incision was made over the lower end of the upper fragment, embracing the existing wound, the state of affairs fully investigated and found as previously stated. The comminuted fragment of the inner condyle was held by the periosteum and perichondrium as though in a pouch, the joint surface being intact. A hole was drilled through the external condyle, the fragment then properly adjusted, the boring tool carried up into the shaft of the humerus, and an ordinary box nail of two inches (having been rendered aseptic in an alcohol flame) driven in and the entire wound closed by catgut sutures. A drainage tube was inserted and an angular metalic splint adjusted over ample dressings. Five days later the wound was dressed, drainage tube removed and splint re-applied. Recovery was uninterrupted, with no deformity and perfect union. Two months later an incision was made down on the head of the already protruding nail, and its removal easily accomplished. An X-ray picture of the fractured bone, with its confining nail in position, taken just previous to its removal, gives an excellent idea of the work and its result.

Case V.—David S. Bradley, 45 years of age, of Luray, Virginia, about three months since, sustained a fall from a tree, fracturing, in the fall, the left humerus at the junction of the middle and upper thirds. The injury was first treated by Drs. Keller and Hudson, of Luray, who, however, failed to secure union. The personal history shows that up to about four years since the patient was an habitual drinker, but since that time has abandoned its use. No indication of any specific trouble. Was in the Staunton Asylum for the Insane four years since. Remained under its jurisdiction for about seven months. The mental condition now fairly good. The patient was brought to the Dispensary of the University of Virginia, and it was there decided to operate, since the limb in its condition was worse than useless. The night previous to operation the patient was well purged and the left arm was thoroughly scrubbed with soap and warm water, next with 1 to 2,000 bichloride of mercury and a hot bichloride compress applied, which remained for 24 hours.

The patient on the morning of operation being anæsthetised there was a free incision



Photograph of Case IV.

made down to the bone on the outer aspect of the arm. The seat of fracture was found enveloped in a mass of formative tissue constituting the so-called "false joint." The ends of the fragments were soft and bled easily—being practically useless. These were sawn off with as small loss of length as was consistent with the securing of firm bone, through which to pass the wire and secure the suturing, which the accompanying photographs show. They also serve to show the different steps of the operation fairly well. The wound healed entirely in two weeks and without suppuration and the patient was returned home. An appreciative letter from Dr. Keller and a grateful one from the patient assured us of the complete success of operation. In this case as in all here reported, except the first two, two wires were used, the one applied laterally through both fragments, the other antero-posteriorly, so, as far as possible to restrict motion. Suturing wires should be so arranged as that the twisted ends avoid large vessels and nerves, thus removing the possibility of fatal hemorrhage or paralyzing neuritis. A case of fatal hemorrhage produced by pressure necrosis—incident to the use of a decalcified bone ferule—has been reported. The splicing material ulcerating into the femoral artery and causing death before aid could be rendered.

The writer claims no originality for the methods here cited, many surgeons today using this practice in treatment of fractures. The idea is an old one; thanks to aseptic surgery, we of today have no hesitancy in converting a simple or even comminuted fracture into a compound one.

The conditions necessitating treatment of fracture by bone suture may be briefly summarized thus:

1. All fractures where vicious union produces serious deformity or impairment of function, no matter how long the duration—provided the grounds upon which we act be reasonable. That is to say those in which the conditions of the fragments themselves admit of securing mobility of a stiffened joint, straightening of angulation, or approximation to original length. This condition can frequently be determined only by incision and dissection. Even then if it be found that no benefit can accrue from breaking up the existing relations between the fragments, no harm need result.

2. All fractures where ligamentous union exists, demand this treatment to secure, either in whole or in part, perfect performance of function. The causes of such union—if union it may be called—are for the most part intrinsic, alcoholism, syphilis, rheumatism. Such a condition frequently prevails, however, from the entanglement of soft tissue between the extremities of the involved fragments.

All recent forms of fracture where muscular action renders difficult the maintenance of severed fragments in apposition no matter whether said fractures be simple or compound. All fractures involving joints, particularly if there be comminution of the fragment entering into the composition of the joint. Of course under all circumstances, the age, physical condition, etc., of the patient must be duly considered.

The cases here detailed and other similar work has been done before the medical class of the University of Virginia from which corps skillful, trained help is always to be made available and to the assistance of which the uniformly successful surgical work of that institution is largely due.

Perforating Ulcer of Duodenum—Operation—Recovery.*

By Hugh M. Taylor, M. D., Richmond, Va., Professor of Practice of Surgery, University College of Medicine: Surgeon to Virginia Hospital, etc.

Fortunately, this is a rare disease. We say fortunately, because its diagnosis is conceded to be very difficult, and in many instances impossible; and because, as is the case in many acute gastro-enteric lesions, life can only be saved by early surgical intervention.

It was my privilege recently to meet with a case in which not only were the difficulties in making a diagnosis impressed, but equally so was the imperative need of prompt operation illustrated. The intra-abdominal lesion was not, at first, diagnosed as one of duodenal perforation. Per contra, it was supposed to be a case of ruptured appendicial pus collection, with suppurative peritonitis. Prompt operation saved the life of an interesting young woman, otherwise doomed, and, as far as our researches enabled us to ascertain, permits us to put upon record the second case of perforating duodenal ulcer to recover after operative intervention.

We would not convey the impression that our interest in this case is centered in the fact, if it be a fact, that this is the second recovery recorded. Our interest should be focussed in the lesson it teaches, that such cases can be saved by prompt surgery. As to the number of recorded

*Read before the first meeting of Tri-State Medical Society (S. C., N. C. and Va.) Held at Charlotte, N. C., January, 1899.

recoveries, it is due ourselves to state that we have not looked into the subject very exhaustively.

In the *Twentieth Century Practice*,* the statement is made that sixteen cases of perforating duodenal ulcer have been operated upon within the last six years, but no report is made as to the number which recovered.

Greig Smith,† in his work on abdominal surgery, says that at least one success is recorded.

In the *American System of Practical Medicine*,‡ by Loomis and Thompson, the statement is made that four cases have been operated upon—one with success.

The medical and surgical literature of perforating duodenal ulcer is strikingly meagre. As far as we have ascertained, its surgical interest seems only to have attracted the attention of Greig Smith. In such works as the *American Text-Book of Surgery*; *Surgery by American Authors*, Parks; *System of Surgery*, by Treves; *Practice of Surgery*, by Wharton and Curtis, Wyeth's, Moullins, and others, duodenal ulcer is only mentioned as a frequent complication of extensive burns.

Even a brief resume of all that has been recorded in the works on Practice of Medicine as to the etiology, special and differential diagnosis, and medical treatment of duodenal ulcer, would be beyond the limits of this paper, and while, in all of its phases, it is interesting, we must limit ourselves to its diagnosis and surgical treatment.

It is a matter of common observation that while gastric and duodenal ulcer have much in common, there are notable and inexplicable clinical difference. Duodenal ulcer, in the proportion of 16 to 2, occurs in adult men and not infrequently in robust men. It may occur at any age, from infancy to senility. Gastric ulcer, on the other hand, is prone to occur in anæmic young women. Let me remark, in passing, that I have never been able to reconcile the occurrence of gastric ulcer in young women with the generally accepted theory that it is due to thrombosis or to some type of obliterating arteritis of a terminal artery. Degeneration of the blood vessels is not the rule in the young. No exciting cause for thrombosis commonly co-exists, and in vegetative endocarditis duodenal ulcer does not occur. On the other hand, in support of the theory of obliterating arteritis, it is claimed that thrombosis and ulceration have been artificially produced. Whether this circumscribed molecular death is due to thrombus, to an arteritis obliterans, to a neuritis with trophic degeneration, or is microbic in origin, must, for the present, remain an open question, and it is equally impossible to explain why, in some instances, duodenal ulcer is attended with marked local symptoms, and in others with no symptoms at all. Prior to rupture, the symptoms, if any are manifested, are easily and frequently confused with those incident to gastric ulcer—morbid changes about the pylorus, inflammatory conditions about the bile tract, and with so-called gastralgia, neuralgia, etc.

Notably by Loomis and Thompson, in *American System of Practical Medicine*, the differentiation between gastric and duodenal ulcer is fully elucidated. It is claimed that duodenal ulcer is more frequent in men, and is less frequently attended by hemorrhage or dyspeptic symptoms; that icterus is more common; that pain does not come on for three or four hours after the ingestion of food, and what is of special interest to the surgeon, perforation and peritonitis is more frequently met with as a sequence of the duodenal ulcer. These writers fail, however, to differentiate between the symptoms of duodenal ulcer and those incident to bile tract troubles, cancer of pylorus, pancreas, etc., and we think they are much more emphatic in their conclusions than would be expressed by surgical clinicians experienced in diagnosing obscurely defined intra-abdominal lesions.

Greig Smith emphasizes this point, and claims that the disease "is usually, as regards symptoms, latent, or produces evidences of its existence so vague and uncertain that diagnosis of duodenal ulcer is rarely made."

As in other intra-abdominal lesions, exceptionally classical symptoms may clearly define a typical case. The leading symptoms—i. e., vomiting and pain some hours after meals, occasional hemorrhages and local pains and tenderness are equally common symptoms of so many other morbid conditions. Even in perforation, the cases are, as a rule, atypical, with confusing and misleading symptoms.

The case we recently treated illustrates this last conclusion. The patient, a young school girl, æt. about 17 years, while not robust, had always enjoyed fairly good health. About one week before the perforation occurred she began to experience some intra-abdominal pain, but does not recall that it was focussed in any one special spot, or that it was made worse by eating, exercise, or anything she did. It was, however, sufficiently severe to prompt her to see her physician several times, and she was told by him that he feared it might be

*Volume VIII, page 473, 1898.
†Volume II, page 785, 1898.
‡Volume III, page 193, 1898.

incipient inflammation of the appendix. There was no vomiting of either food or blood, no bloody stools. She had rarely in her life suffered from indigestion, and this obscure pain had existed only a week. I was requested to see the case in consultation at two o'clock at night. At that time she was profoundly collapsed from a supposed ruptured appendicial pus collection. The evening before she had been on the street, and, after eating a hearty supper, walked with some friends six or eight blocks to a depot. On her way back, she walked very rapidly, and just as she reached home she was taken with violent pain, etc. I have dwelt upon the history of this case because it sustains the conclusion that duodenal ulcer may exist with minor local somptoms prior to rupture and very confusing symptoms after rupture. Perforation of the duodenal evidently occurred several days before the night of the acute symptoms,and a circumscribed pus collection was walled in by adhesion of the transverse colon to the duodenum at the point of perforation. This was subsequently revealed by a large patch of lymph on the duodenum with a corresponding patch on the transverse colon. Perforation and local infection, and the formation of the circumscribed abscess, evidently occurred while the patient was up and about, and this abscess and local peritonitis was not attended with sufficiently severe symptoms to cause either very much suffering or anxiety, and certainly they were not such as would foreshadow the impending danger. When this abscess burst into the peritoneal cavity, the symptoms rapdly became extremely acute. The rapid pulse, subnormal temperature, pinched features, vomiting and rigid abdominal muscles, presented a clear clinical picture of intra-abdominal infection. But there were no guiding symptoms indicative of the source of the infection. The same acute symptoms are common to infection from the appendix, ileus, peptic typhoid, tubercular perforations, etc. Granting that the pain was above the umbilicus, time and again we have seen the pain of acute ileus or appendicitis focussed above the umbilicus, and very recently we saw a case, in which there was no abdominal pain, no muscular rigidity,the abdominal walls could be pressed without pain back to the spinal column. There was, however, short pleuritic-like pain under the right breast. There was a history of appendicitis, and a section revealed a gangrenous appendix.

If we recall the distribution of the great sympathetic ganglion to the abdominal viscera, we will be reminded of the fact that pain from almost any part of the intestinal tract will commonly be referred to a point about or even above the umbilicus in the region of the superior mesenteric plexus.

The great desideratum in this, as in many intra-abdominal troubles, does not seem to be an improved operative technique, but rather greater proficiency in diagnosis.

The surgeons interest in the treatment of duodenal ulcer begins possibly when, by medication and dietetics, the case is found to be incurable, possibly when profuse or prolonged hemorrhage endangers life through acute or chronic anemia, and certainly when perforation and local or general infection occurs. This infection should be classed with that incident to appendicitis,to bullet wounds of the bowels, to typhoid perforation, etc. In each instance we have infection from intestines in which pathological conditions give active pyogenic properties to its ptomaine factors. In general peritoneal infection from appendicitis, from perforation in connection with cholangitis or cholecystitis, or gastric or typhoid ulcer, and in bullet wounds of the hollow viscera, preventive surgery is ideal. The key to success is an early operation to prevent rather than the almost forlorn task of trying to cure diffuse suppurative or septic peritonitis. Perforating duodenal ulcer is as logically within the province of justifiable surgery as any of the morbid conditions above mentioned, and certainly, if correctly interpreted, the symptoms present a clinical picture, clearly noting, from some source, a general peritoneal infection. It is uniformly fatal to wait for the typical manifestations of general infection. Appreciating this truism, Dr. Nuckolls, as soon as he saw the patient, asked for consultation and advised her removal to the Virgina Hospital. There was a delay of four or five hours incident to removing the patient to the Hospital and in trying to react her by means of saline infusion, strychnia, morphine, and the usual remedies called for in profound shock.

It was 10 o'clock—twelve hours from the beginning of the acute symptoms—when the operation was begun. In that time general suppurative peritonitis was fully developed. Asssisted by Drs. Edward McGuire, Virginius Harrison, and Marvin Nuckolls, the usual section for appendicitis was made. In incising the peritoneum, gas and pus poured out of the general peritoneal sac. No diminution in the area of hepatic dullness had been appreciated. The appendix was quickly delivered, and, much to our surprise, was found not involved in the least. Thinking the focus was in the uterine adnexia, the incision was enlarged downward, and an examination of the pelvis was also negative in its results, except to

disclose much puddling of sero-purulent fluid. Having eliminated the two most common sites of infection, and as there were no evidences of strangulation of ileus we turned our attention to the bile tract. To expose this site, our incision had to be extended well up to the ninth costal cartilage. This long incision and extensive exposure of the abdominal contents enabled us to note that the intestine—notably the transverse colon—was covered in many places with the commonly observed diphtheritic-like lymph deposit. There was also more injection of all the structures, and the presence of a considerable quantity of greenish-looking fluid was also noted. The bile tract, when fully exposed, was also found intact and not the focus of trouble. Very quickly, however, we found the duodenal perforation. It was situated on the anterior surface of the third portion of the duodenum, about midway between its free border and mesenteric attachment, and from it the duodenal contents were freely escaping. The perforation had the characteristic punched-out appearance, and was not larger than the lumen of a goose-quill. For an inch or more around the perforation the duodenal wall was thick, indurated and inelastic, and covered with a layer of yellow, grayish lymph.

There was nothing unique in the operation. The infected lymph was carefully peeled off from around the perforation, and an effort was made to invert the ulcer by means of interrupted silk sutures. This was found impracticable; the thick duodenal wall and friable tissue were the difficulty. A purse string buried deep in the thickened wall was made to encircle the perforation, and when tied this effectually closed the opening. With silk sutures the ugly looking adjacent peritoneal tissue was brought over the purse string and perforation.

The further technique consisted in carefully wiping away with gauze sponges the lymph deposit wherever found. Next the visceral and abdominal cavity were subjected to prolonged irrigation with hot saline solution, and finally the abdomen was riddled with gauze drainage.

Convalescence was slow — a consequence of imperfect drainage and infection of the abdominal incision. For the first three or four days a great deal of blood serum was drained off; this gradually lessened in quantity, and in five or six days the patient was anæsthetized and all the drains except that one which was in contact with the sutured perforation were removed. Puddling of pus was found to have occurred along or behind several of the strips, and a discharge of pus from these infected tracts lasted for several weeks. The ultimate outcome was a satisfactory convalescence, and the patient, when discharged, presented a better condition than is the lot of many who recover from a celiotomy of less serious proportions.

The Eye as a Causative Factor in Functional Nervous Disorders.*

By W. H. Wakefield, Charlotte, N. C.

Even the careless observer cannot fail to notice that functional nervous disorders are increasing in frequency and intensity among our American people. The causes of neurosis are almost infinite in number and variety, but they are divisible into two classes, viz: the remote, or predisposing and the immediate or exciting. The remote or predisposing causes, while frequently of insufficient activity to originate neurosis, may, when the nervous disturbance has once been established by some exciting cause, be sufficient to perpetuate it for an indefinite time. Exciting or immediate causes may, or may not be long-continued, and their effects will depend on their intensity of action, duration, and the susceptibility of those subjected to their influence. This susceptibility is probably present only in those persons in whom predisposing causes operate and is in proportion to the activity and intensity of these remote, causative factors. It is not my purpose in this paper, to attempt a discussion of the varied conditions that act as causes, remote and immediate, and my remarks will be confined,

1st. To anatomical abnormalities, often overlooked, of a single organ, and the manner in which they act as predisposing causes.

2d. To the influence of conditions induced by civilization as exciting causes. In leaving out of consideration all other disturbances of nervous equilibrium, I do so with a full appreciation of the fact that many of them are of equal importance to the conditions which I will discuss. It is not claimed for the causes discussed that they are the only agencies of note that operate to produce the disorders named, but simply that they are important and do not receive the recognition they merit.

The organ whose abnormal anatomy acts as a predisposing cause of functional nervous disorders is the eye. The visual act requires, for its proper performance, the most precise action and co-ordination on the

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part of the recti and ciliary muscles, and if the observed objects are close to the eye and small the consumption of nerve force is greater than that attending the exercise of any other bodily organ. In order to arrive at a fair understanding of this subject, let us briefly review the theories involved in the adjustment of the eyes in the act of vision.

When parallel rays of light (for our purpose rays coming from a distance of 20 feet are considered as parallel) enter healthy, normal eyes, they are refracted as they pass through the media, forming on the retina a clear, distinct image the muscular mechanicism of the eye meanwhile remaining passive. Rays of light from near objects are not parallel, but divergent, and must be more strongly refracted in order to meet on the retina. This is effected by the contraction of the ciliary muscle producing variation in the convexity of the lens, thus increasing its refractive ability. The nearer the object the more divergent the rays, hence the greater the demands on the focussing muscle. If the eye is normal, this function is performed with ease, the ciliary muscle having abundant strength to produce the changes to any reasonable extent without fatigue. The eye may be said to be normal when images of an observed distant object (20 feet distant or further) are clearly focussed on each yellow spot, the ciliary and recti muscles being at rest. These are the conditions that permit minimum inervation. In deviating from the normal the eye may be too short (hyperopic or far sighted), too long (myopic or near sighted), or astigmatic (oval), or one or more of the recti muscles may be too weak (muscular insufficiency). These conditions are the anatomical abnormalities mentioned as acting as predisposing causes of functional nervous disorders, and any one of them when present is capable of producing considerable perplexity. In hyperopia the eye is too short for parallel rays to focus on the retina without inervation and contraction of the focusing muscle, and this action on the part of the muscle of accommodation is in direct proportion to the extent of the hyperopia. So long as this eye continues to see clearly, at any distance, this effort must be continued, and the nearer the object the greater the exertion; hence such an eye is never at rest except when closed, and as a portion of its accommodative power is consumed in its performing distant vision (which should be passive), it has less reserve to draw from when looking at near objects. If this eye be used for considerable periods of time at close work, as in reading, sewing, engraving, etc., the ciliary muscle is overtasked, and the constant strain of nervous energy passing to the laboring muscle exhausts the nerve force of the body (consumes its reserve.) In astigmatism the refracting surfaces of the eye are oval, and light rays passing into it in any meridian are brought to a focus at a different point from the rays that go in at any other meridian; hence clear-cut images are impossible, but by "sectional contraction" of the ciliary muscle vision is aided. The strain on the muscle is intense, and the consumption of nervous energy is in proportion to the exertion of the muscle. I am aware that the theory of sectional contraction is not accepted by many, but it accounts for the peculiar strain of astigmatism better than any other. "The foregoing explains the act of vision as per formed by each eye separately.

The performance of the visual act with both eyes fixing an object necessitates the co-ordinate action of the ciliary and the recti muscles. We have not space to fully explain the relation existing between "convergence" and "accommodation," and can merely state that when the normal eyes are fixed on a distant object the visual lines (lines running from the yellow spot of each eye to the object) are parallel, and the external (recti) and internal (ciliary) muscles are in a state of minimum innervation; also that as the point of fixation approaches the face, these muscles are correspondingly innervated. For a definite degree of accommodation a corresponding degree of convergence must be used, and vice versa. When hyper-metropia is present this harmonious action (co-ordination) is disturbed, the muscles are fretted, and heavy demands made on the nervous system.

Not infrequently one or more of the recti or oblique muscles are weaker, proportionally, than their opponents. This condition, called insufficiency, is a greater obstacle to easy co-ordination than hypermetropia, and when present, a constant (though unconscious) effort is necessary to preserve binocular vision, the degree of the effort being in proportion to the amount of insufficiency and the use made of the eyes.

Persons having hyperopia, astigmatism, or an insufficiency of any of the external ocular muscles do not, of necessity, suffer serious inconvenience, but the visual act is rendered much more difficult than when such conditions are absent. Competent observers, such as Donders, VonGræfe and scores of able men now living, taught, and teach that perplexities of the visual art, such as I have named and endeavored to explain, briefly, are fruitful sources of the ailments enumerated.

We will now consider the merits of civ-

ilization as an exciting cause. The stage of civilization to which we have attained sustains a causation relative to functional nervous diseases largely through the nature of the tasks which it imposes on its subjects. The time in which we live is a competitive age in the full sense of the term: men, women, boys and girls vie with each other in the race for riches, fame, position, knowledge, honors, pleasure, bread, etc. Year after year, with increasing fierceness, this struggle goes on forcing and stimulating many to do beyond their strength, imposing on many intelligent and educated persons conditions unfavorable to their well-being, and it is this class, those who cannot harmonize with their surroundings, that furnishes many of the sufferers from functional nervous disturbances. The "good old days" of our grandparents did not produce such a crop of "neurasthenics" as the last decades of the nineteenth century, simply because life was taken easier then than now. The "break-neck speed" at which we live and labor, and the immense increase during the last fifty years in the amount of "close" or near work done, are active causes (not the only causes) of the distressing ailments under consideration. Is civilization responsible for these? It is directly responsible for the latter and it has given the former a tremendous impetus by furnishing it "means and ends." That the life forces are more rapidly consumed and conditions favorable to the development of functional nervous troubles, more frequently induced by fast living than by temperate lives, goes without saying. (By fast living is meant excesses of all kinds, in work or pleasure.)

The tremendous development during the last fifty years in the mechanical arts and machinery, the general introduction of railroads and telegraphs, the flooding of the world with cheap books, magazines and great newspapers, the establishment of free schools for the masses and the multiplication of high schools—these and many other similar developments, the products of civilizatation, and in their turn acting as civilizing agents, have, it is scarcely necessary to say, immensely increased the amount of near work done. Habits of life have changed, the children of muscle-workers, even muscle-workers themselves, have become brain-workers, and in the performance of their duties exacting and excessive demands are made on the organ of vision. We have shown that when this organ is normal it possesses the ability to respond with ease to any reasonable demands that may be made on it, that if it be abnormal, it labors at a disadvantage, and the increased demands made on it by the near work of civilization, may be sufficient to severely task its muscles and exhaust the "reserve" nervous energy of the body. A train of symptoms peculiar to this condition have been recognized for years by observers, and to them has been given the name "asthenopic symptoms." They generally come on while (or after) the eyes are being used at near work, and consist of headaches, mild or severe, pains in the eye, burning of the lids, the sensation of a foreign body under the lids; in reading the letters run together, or become indistinct. These symptoms present themselves more generally under artificial light than in clear daylight.

In addition to these somewhat mild "asthenopic symptoms," it is not unusual to observe in some subjects frequent attacks of migrain, neuralgia, headaches, with nausea after attending church or the opera, and in some "neurotic subjects" general neurasthenia. It is not claimed that all sufferers from chronic headache, neuralgia, etc., have refractive errors or muscular insufficiencies, but facts gathered by observation and experience warrant the opinion that in very many of these cases the predisposing cause lies in some abnormality of the organ of vision, and that practically all persons presenting the simple asthenopic symptoms have demonstrable ocular errors, and that the correction of these errors, in the great majority of cases, affords relief from their distress, and this, too, in cases in whom drugs have failed to afford more than a passing relief.

In view of the facts enumerated I have no hesitancy in advancing the opinion that all patients presenting the symptoms described, if not relieved in a reasonable time by medical and hygienic treatment should have the condition of their eyes looked into by some one competent to perform that duty. I append a brief history of a few cases, hoping thereby to shed some light on the character of the ailments under discussion and the form of treatment which, in many cases, is the only curative measure that affords permanent relief.

Case 1.—Mrs. T.; saw me in July 1892; aged 34; housekeeper. From childhood has presented the "simple asthenopic symptoms" on reading or sewing. About three or four years ago purchased from a jeweler a pair of convex glasses, the use of which afforded some relief for a time, but for the past two years she has suffered frequently from sick headache. She is extremely nervous, and for six months has been quite feeble, appetite capricious, bowels constipated, sick headaches proving more frequent and worse; passes sleepless nights and suffers from what her physician calls

nervous dyspepsia. She cannot read or sew ten minutes without inducing severe pains in the eyes and head; is so prostrated that she cannot visit a neighbor or attend church; consults me on the advice of her physician, who had been in almost constant attendance upon her for four or five months. The examination of her eyes without a mydriatic demonstrates the fact that, with and without her glasses, her distant vision is 20–20: also that she has a low degree of manifest, simple hyperopia and weak internal recti muscles. Her eyes were now brought under the influence of atropia by instilling into each eye one drop of a four-grain solution three times daily. During the succeeding seventy-two hours her refraction was worked out, showing a high degree of compound hyperopic astigmatism. Proper glasses were prescribed and worn, and the patient without any medication, progressed rapidly to a condition of health and comfort, gaining 25 pounds in weight in three months.

One other feature in this case is worth mentioning. The solution of atropine was first dropped in eyes about 3 p. m., and again at 8 p. m., at which time the patient retired for the night and secured eight hours of refreshing sleep—the first good night's sleep in about six months. She continued to sleep well, and was free from headaches, so long as the eyes were under the influence of atropine, but in four or five days after its discontinuance, sleeplessness and headaches returned and the atropine was resumed, using weaker solutions each week for four weeks. The eyes by this time had grown accustomed to the lenses and on recovering from the effects of the atropine the nervous symptoms did not return. The prompt alleviation of the distressing symptoms by the atropine solution can be explained by its stopping the drain on the nervous system through the ciliary muscle which it paralyzed.

Case 2.—Miss W., student, aged 16; consulted me July 30, 1892; asthenopic symptoms for years; steadily growing worse; similar to Mrs. A.; had studied very hard for several months during the winters of 1891–92, but in April of the present year (1892) was obliged to desist from study. She suffered much from headache, pains in the eyes and back of the head. Her physicians used atropine solution in her eyes and "rung the changes" in administering tonics. At his advice she consulted me. Her eyes were then very much inflamed, photophobia annoyed her greatly, and her headaches were distressing if she used her eyes at near work for even a few minutes. She was reduced in flesh, pale and very nervous; vision 20–20 and all glasses rendered it worse. One drop of a 4-grain atropine solution was put into each eye three times daily, and in twenty-four hours vision in right eye was reduced to 9–200 and the left to 11–200, which represented her degee of distant vision with the focusing muscle paralyzed. Suitable glasses, correcting her comp. hyperopic astigmatism, were prescribed and worn. These and a 6-oz. bottle of elixir lactopeptin, with phos. f. q. and s., constituted the treatment, which resulted in her complete restoration to health.

In September 1892, she entered college, and has had no trouble, although she studied very hard, leading her classes,

Case 3.—Mr. H., student, aged 18, consulted me December, 1891; has suffered a good deal from headache since he was 11 or 12 years of age. Before going to college, two years ago, he had his eyes examined and wore glasses to correct his hyperopic astigmatism. These afforded him relief for about two years. When in college, in 1891, he had a "bilious" attack, which confined him to his bed a week or so. On resuming his studies his head ached a good deal, and in about two weeks he experienced peculiar symptoms. His head appeared as large as a barrel, his left hand, arm, leg and foot appeared enormously enlarged. After a few days of rest and medication these sensations disappeared to return again on resuming his studies.

He visited an oculist in Detroit, who increased the strength of his lenses a trifle, but the symptoms returned as soon as near work was resumed. He left school, but months afterward was unable to read more than 15 minutes without severe headache. I found that his lenses corrected his refractive error, but I also found the internal recti muscles and the right inferior rectus were weak. The internal recti muscles were exercised twice daily by prisms for a month, thereby vastly increasing their strength and relieving his distress on doing near work a trifle. A prism, correcting about three-fourths of his vertical insufficiency (inferior rectus) was incorporated in his right lens, which rendered him entirely comfortable. He reads "all day and half the night" with no distress.

Case 4.—Miss G., aged 12, a healthy-looking, jolly girl; suffers very much after reading or sewing; is very fond of reading, but her headache forces her to stop in 20 to 30 minutes. Although perfectly healthy in every other particular, she was subjected to a thorough course of medical treatment (extending over three months) but as her headaches were not relieved in the least, her

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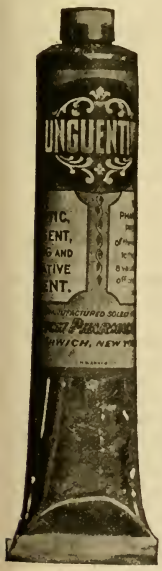

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parents brought her to me for examination in February, 1893. Careful examination of her eyes, without a mydriatic, revealed simple hyperopia in the right and comp. hyperopic astigmatism in the left eye. The use of homatropin disclosed a comp. hyperopic astigmatism in both eyes low in degree. Glasses correcting all the astigmatism and a small portion of the hyperopia were presented, and their use relieved the patient in a week's time. She can read with entire comfort.

This list of cases could be continued indefinitely from my own practice and all oculists could add to it presenting cases similar in character and full of interest to the earnest medical man. But my paper is already too lengthy and I must hurry to its close.

Resume.—The position taken is that the number of persons consulting physicians for relief from some functional disorder from which they suffer, has materially increased during the last 25 to 30 years, and in accounting for this increase, the exacting near work of civilization is shown to be causative through the heavy burdens which it places on the ocular apparatus. It has also been shown that when this apparatus is normal these burdens cause no serious inconvenience, but when certain abnormalities are present, it labors at a disadvantage and the burdens become onerous, resulting in muscular and nervous exhaustion more or less profound.

The plan of treatment advocated and set forth in the report of cases is in line with one of the first principles involved in the practice of the healing art, viz: "Remove the cause;" failing in this, "Counteract its effects."

Report of Cases of Rupture of Uterus During Pregnancy.†

By Francis D Kendall, M. D., Columbia, S. C.

I have two very short cases I wish to report, so will take but a very few moments of your valuable time.

Case 1.—I was sent for by a mid-wife at 2 A. M., *in haste*, July 13th, 1894. She had a woman in labor (colored) and needed the assistance of a physician. I hurriedly went to her, and found the woman had just died. She was still quite warm. On examining the abdomen, found it very large. Digital examination, could feel the child's head, but could not ascertain the position, as the head moved upward when touched. I then tried to apply forceps, but the head slipped entirely out of my reach. I could distinctly feel the child moving—so I determined to open the body. As soon as I opened the abdomen, the child's head popped up through the opening I had made; it was entirely out of the uterus. On examining the contents of the abdomen, I found that the uterus had ruptured the entire length on the left side, from the fundus to the os, and on the right side there was an intra-mural fibroid tumor, which with the womb weighed 14¼ pounds; the child was a well formed boy, weighing 9 pounds. The woman had borne six children before without trouble, except the one before this, which was removed with instruments, alive. The woman was a negress, 34 years old, and has always been healthy. The child died just after it was delivered.

Case 2.—This case is somewhat similar to the above. I was again called by a mid-wife, this time eight miles in the country, at 4 o'clock in the morning, on January 20th, 1897; when I got there it was 6 o'clock. I found a handsome young woman dying; could see the child moving distinctly; I waited until the end came, which was at 6:35 A. M. Just as soon as she died I opened her, and found that the uterus had ruptured, seemed to have just split, from the fundus toward the os; the placenta was still intact and the cord pulsating, but very feebly; rent in the uterus on left side, and the child partly out of the organ, and alive and kicking. I tied the cord and removed a fine boy weighing 10½ pounds. He is still alive and well. This was a young woman, 18 years old, first time pregnant, well formed, weighing about 130 pounds, 5 feet 2 inches high, white, and in good circumstances for a farmer's wife.

1309 Plain Street.

†Read before the Tri-State Medical Society of the Carolinas and Virginia, at Charlotte, N. C., January, 1899.

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THE

Charlotte Medical Journal

Editorial Department.

E. C. REGISTER, M. D. J. C. MONTGOMERY, M. D.

Editors and Publishers.

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SUBSCRIPTION. $2-50 PER YEAR,

THE TRI-STATE MEDICAL SOCIETY OF THE CAROLINAS AND VIRGINIA.

At 11 o'clock on Wednesday morning, January 18th, 1899, the Tri-State Medical Society met in the Court House at Charlotte, N. C., for permanent organization, and was called to order by Dr. E. C. Register, of Charlotte.

Dr. H. F. Chreitzberg, Pastor of the Tryon Street Methodist Church of Charlotte, invoked the Divine blessing.

ADDRESS OF WELCOME.

Dr. Register introduced Col. H. C. Jones, one of Charlotte's most prominent lawyers, who welcomed the Convention by saying:

Gentlemen of the Medical Society:—I am satisfied that the most agreeable part of the program which has been set forth for this meeting has devolved upon me, the duty of welcoming you in the name of the Medical Society of Charlotte and in the name of the citizens of this place. It has fallen to my lot many times in my long residence in Charlotte to welcome many Societies and Guilds and Associations of men, and it has always been a matter of peculiar pleasure to me to welcome any branch of this Society of the great medical profession. It goes without saying that it is a pleasure to any Southern town, or in fact to any town, to welcome a representative body of cultivated gentlemen. But coupled with the pleasure that we naturally feel, or any town might feel, in having it selected as a place for your meeting, any thoughtful community or any thoughtful body of citizens must feel as they see the gathering of the representatives of the medical profession, that they are in touch with one of the grand divisions of the army of those who work in the line of searching out truth, and the fascination of your investigation is that the truth which you seek, and all other professions recognize the fact that the truth you seek is absolute truth, not truth clipped and shaped and fashioned to meet the requirements of some dogma of an ecclesiastical creed, or some plank or platform of a party, not a truth decked to catch the ear or the fancy of the multitude at large, but truth absolute and truth beneficent; the truth that guides you in your efforts to lighten the burdens of human suffering and will guide you in those conflicts which you are ever waging at our bedsides with the phantom of death. There is a peculiar fascination for those who watch your body, because of the fact that it is the most conservative of all the bodies, because of the care with which you investigate, because with you a subject passes from the domain of the speculative into the domain of the absolute truth. We welcome you not only because of the great interest we have in your researches, these constant, these tireless researches of yours, but we have other acknowledgements to make, and in making them in the name of this community I violate no cannon of good taste when I speak of the immense obligations which society owes for its culture and refinement to you; and even in politics, that seem so far removed from the domain of your investigations, the membership of this great body has always stood for the genuine and for the true. We acknowledge not only the benefits that we derive from your services in the art of medicine, but we know that men never had the decency to cleanse their streets until you taught them filth was one of the worst foes that imperilled their lives. All these things I am here to acknowledge, and in the name of the city of Charlotte and her medical fraternity, to welcome you here.

Now, as I said before, there is an absolute pleasure in welcoming you for our sakes and for yours, and to acknowledge our indebtedness. And then, as a matter of course, we expect to attend your deliberations here and as a matter of course we expect to be immensely edified by your discussions, for in looking over your program we see many subjects that are entirely familiar to us, for instance, pseudo-membraneous enteritis, and many other subjects of that sort that are matters of daily discussion among the laymen, for you know every laymen thinks he knows more law than the lawyers and more medicine than the doctors.

But there is one subject that I miss from your program that I expected and hoped would be there, and there would be some deliberation upon. You can not be aware that we have an epidemic of grip in our midst, for you have ignored it in your list of theses, and I thought, perhaps, you were

ignorant of the fact, and I would mention it in a semi-professional way, not onlyas a warning, but to apprise you of the fact that there seems to be some diversity in the practice of our local physicians here in regard to the treatment of it, and I thought we should have some deliverance from you on that subject. Now, for instance, a week or so ago I was in company with one of my doctor friends here and he said he had the grip. He at once entered into a dissertation on the proper treatment, and he said corn whiskey and glycerine was the best thing for the grip, and he was still arguing upon it when a fellow came in wheezing and coughing, and he diagnozed the case and said he had the grip. I sat by and listened, of course, for him to prescribe corn whiskey and glycerine. But I glanced over his shoulder, and what do you think he wrote? "Assafœtida pills, five grains each, number ten, to be taken four at a time and repeated every four hours." That is what he wrote and the fellow went off with it. I was a little amazed, and after he was gone I asked him how about it. "Well," he said, "I know that fellow, in the first place, and can trust him to take the whiskey anyhow without any prescription. In the next place, it will never do to have this a matter of common knowledge, for all the revenue of the medical profession would be turned into the bar rooms, and it wouldn't do." I was greatly amazed. I was in the position of the doctor who found a remedy that was a very good thing for the Dutchman but was hell for the Irishman. My friend took a dose of corn whiskey and I noticed he left out the glycerine. I suggested to him that he had left out the glycerine, and he said it wasn't absolutely necessary to take the glycerine along with the whiskey, that he had some glycerine at home and he would take it when he got home. The thing got still more obscure until after a while he took another dose of corn whiskey. I suggested that he had better make a memorandum to take the glycerine, but he said the regular dose was three parts of whiskey to one of glycerine, and he would take that one part of glycerine when he got home with the last drink. Well, I asked him what he would advise me to do if I gotit. He said that would depend entirely on how late I was up the night before. I had some curiosity, and met the fellow afterwards on the street to whom he had given the assafœtida. I asked him how it worked. He said it had a curious sort of smell about it when it came loose in his pocket, that he took the darn thing and it knocked the grip out of him, but his wife had hidden away all his clothes. So you see how important it is that we shall have some deliverance on the subject of treating the grip.

There are many other things I might mention. This appendicitis business, for instance. These newspaper men are eternally alarming this community, and the doctors look wise and shake their heads. I saw a fellow here the other day who had eaten a dinner of fried oysters, and he was ready to swear he had appendicitis. It is important that you should let us know somewhat of the symptoms of appendicitis.

As for microbes, I beg you not to disturb that question. This community is resting after a long period of vexatious opinions on the subject of microbes, and there have been many prayers and beseechings to the newspapers to let it alone, and we hope that you will not disturb that subject.

But in a general way, gentlemen of the medical profession, this community has nothing else to ask of you except that you will let them know how they can contribute to your enjoyment, and let me assure you that it will be a matter of pleasure and pride to them to know that they have been able to do so. We hope that we shall so demean ourselves in that respect that we will make it agreeable for you to come again.

RESPONSE TO THE ADDRESS OF WELCOME.

Dr. Hugh T. Nelson, of Charlottesville, Va., responded to the address of welcome, as follows:

Chairman, Ladies and Gentlemen:—It is indeed with unfeigned embarrassment that I undertake to speak before this assembly, which, though not a very large one, is one that I imagine and feel sure is critical. And yet while I feel this embarrassment, I also feel that it is a true pleasure to me to have to respond to this address of welcome which we have just heard so pleasantly delivered. I say it is a pleasure to me because I feel that in making this response, I echo the opinions of a representative body of a noble profession from three representative States of this great Republic. I say representative men, because I have scanned the list composing those who now propose to organize the Tri-State Medical Society, and I see among them many names that I know to be of those who are earnest workers in the field of science, of that science which has for its object the alleviation of human suffering and the prolongation of life. I say they are from representative States, because when I mention North Carolina, South Carolina and Virginia, that triplet of sisters which do now and which have always stood as representatives of every State in

the Republic. What is more fitting than that this organization of a Tri-State Medical Society should be made here in this old city of Charlotte? Its people are from that grand old Scotch-Irish stock which had peopled this entire Piedmont Valley section of our country. We come to them, and we believe in coming to them we come to the truest people upon whom God's sun shines to-day. I come to you more gladly simply because I too acknowledge in my ancestry the same stock which has populated your country. Then I say it is a fitting place in which this organization should be begun, because here from the earliest times of this country, from its earliest population by your parents, it has been foremost in all aggressive movements which have had for their ultimate object the good of the people. Long before our brethren of Massachusetts had broken the British tea caddies and thrown their contents into Boston Harbor, the people here in this town, and probably on this very spot, had organized rebellion and told old George the Third that he couldn't control them. Later on, early in the Revolution, before the guns of Lexington had ceased to boom, here the spirit of freedom had begun an organized effort for the protection of human life and for humanity and the guns from Kings Mountain were echoing over your valleys. In every movement you have been foremost. In 1861, this Old North State came to the front grandly and nobly, and as a Virginian I feel proud to say here in the middle of your State that to-day in the soil of my native State the bones of more North Carolinians are bleaching and rotting than from any other State within this glorious Southland. I say it is a matter we should be proud of that we meet here in this State under such auspices. You have been foremost not only in the times which have departed, but when it became necessary in the very recent past, within the last year, that some movement should be put on foot which should maintain forever and eternally the integrity of the Anglo-Saxon race and maintain its supremacy over every other race, the movement in North Carolina was inaugurated you stand before the eyes of the other States as preeminent for defending yourselves and have shown to the world that wherever God's sun shines on the Anglo-Saxon race, it is that race which shall dominate. We are glad to come. We are glad under such auspices as these to come and organize the Tri-State Medical Society, and God grant that in its progress, its usefulness and its work, it may take pattern after this glorious old State in which we are to-day assembled.

The Society being now ready for business, Dr. W. H. H. Cobb, of Goldsboro, the Temporary President, took the chair, and delivered his address, as follows:

PRESIDENT COBB'S ADDRESS.

Gentlemen of the Medical Association of the Carolinas and Virginia:

It is eminently appropriate that the permanent organization, and first regular meeting of this Association should be held in this city, honored as the birthplace of American liberty; and in this State, whose brave compatriots of the signers of the Mecklenburg Declaration of Independence, on the 10th day of November 1898, in the City of Wilmington, in a second Declaration of Caucasian Independence, proclaimed to the world that, henceforth and forever, the Anglo-Saxon shall rule.

As you have received such cordial and eloquent welcome to the Queen City of the South, I bid you doubly welcome in the name of the Grand Old North State, and beg you accept her open-handed and large hearted hospitalities and greeting.

I would be less than human did I not greatly appreciate the distinguished honor of being the first presiding officer of this learned and scientific Association. Chosen, I fear, through your kindness and generosity, and not for my fitness or ability to discharge the responsibilities of this high office.

The founders of this Association, embracing some of the ablest and most scientific physicians, surgeons and specialists of the States embraced, earnestly strive to cement closer the bonds of union of the medical profession; to elevate the science of medicine in all its branches, by building up an organization that will keep pace with similar institutions, wherever located, in high-toned character, talent, efficiency and scientific attainments.

This Association is not the creature of, or feeder for any school, clique, ring or set of specialists or professors, as has been uncharitably suggested by some good, but misguided brethren; but was organized for mutual help, enconragement and progress, and fostering a pure, cultivated, enlightened medical science, and by orgnaization give weight and dignity to the utterances and essays of its members.

It is not intended as a disorganizer, or absorber of State medical Societies, for our membership is limited; and our loyalty to State societies is shown by the prerequisite for membership, which consists in being a member in good standing in his respective State medical society,

I yield to no one in loyalty and fidelity to my State society; and could I believe that this Association would prove injurious to

my grand old State medical society, which has but few peers and no superiors, and which has exalted me far beyond my deserts, bestowing upon me its highest honors; I would at this moment decline the very great honor you have conferred upon me, and withdraw from your fellowship.

This organization offers to young, promising, meritorious and ambitious young men, who desire to rise above State lines, and gratify a laudable ambition, a wider field for the display of their talents, than that possessed by State societies.

Our Annual meetings should be characterized by the pleasures of reunion, the interchange of thought and opinion, to the building up of medical science, and the accumulating of annual experiences for the furtherance of medical history.

Permit me to congratulate you upon the grand results of our present organization. We have successfully launched our medical craft, and started upon our first voyage, not with a cargo of *embalmed beef* for the sick and wounded, but freighted with the rich gems of forty-five able and scientific papers, the authors of some of them being numbered among the most learned, scientific and eminent members of the profession in this great country of ours.

The large number of valuable papers presented at this meeting, will far more interest you than any address that I could present, so that I will close by declaring this Association duly opened for the transaction of business, and beg your indulgence, forbearance and charity in the discharge of the responsibilities imposed upon me.

TRANSACTIONS OF THE ASSOCIATION.

After the President's address the first business was the appointment of a committee on Constitution and By-Laws, in order to have a permanent organization. President Cobb appointed on that committee:

Dr. J. G. Tompkins, of South Carolina.
Dr. Paul Barringer, of Virginia.
Dr. Geo. W. Long, of North Carolina.

Dr. Barringer asked that with the permission of the President, the committee be allowed to retire and prepare their report.

Dr. Paul A. Irving.—It is a very important work that this committee has to do, and I think they ought to take as long a time as necessary. I have to suggest that they bring in their report at the evening meeting of the Society unless they can do so earlier.

Dr. Paul Barringer.—I know nothing more than that a very simple draft has been gotten up, and how much change will be required it will be impossible for me to say at this time, as I have had no consultation with the other members of the committee, and I appreciate Dr. Irving's suggestion.

There being no objection, it was ordered that the committee report at the afternoon session.

The President stated that the next business in order was the Registration of Members.

Dr. W. L. Robinson.—I suggest that as we are all assembled here, we had better proceed to work the best we can. I see no reason myself why at least some of the business should not be transacted,

The first paper on the program was read by Dr. Paul Barringer, of the University of Virginia, on the "Purposes of Tri-State Medical Organization."

Pres't Cobb.—Is it the pleasure of the Association that we proceed with other papers?

Dr. George Ben. Johnson, of Richmond, Va.—Mr. President, I move that we proceed with the program for the afternoon session until the report is ready.

Dr. Johnston's motion was put to the Society and was carried.

Dr. J. M. Fladger, Summerton, S. C., read a paper on "Pseudo-Membranous Enteritis."

Dr. Hugh T. Nelson.—Before the next paper is called, I would like to ask, not that I myself want to discuss this paper which has just been read and which I listened to with a great deal of interest and certainly have no comments to make on it, but I just ask as a matter of information if the papers that are read can be discussed, and I think it would be advisable and certainly it would be instructive if the different papers can be discussed as they are read.

Pres't Cobb.—It would be best to discuss them as they are read, unless there are several papers under the same head.

Dr. Geo. W. Long.—I would like to inquire, if in order, whether or not it will be well enough to ask where these papers shall go. We have no committee on publication.

Pres't Cobb.—When we have a Committee on Publication the papers will be referred to them. They are being read now to prevent loss of time, and they will be so referred when we have a Committee on Publication, unless objection is raised.

The next paper, "Gold as a Remedial Agent," by Dr. F. B. Glenn, of Asheville, N. C., was read by title, as the author was absent.

Dr. J. N. Upshur, of Richmond, Va., read a paper on "Lithemia."

Secretary Irving requested that the members come up and register.

On motion of Dr. E. C. Register, the Society adjourned to meet again at three o'clock.

WEDNESDAY AFTERNOON.

President Cobb called the Society to order at 3:20.

The first order of bnsiness was the report of the committee on Constitution and By-Laws, which was read by Dr. J. C. Tompkins, of Edgefield, S. C., first as a whole and then read by articles,

Dr. Geo. Ben. Johnson.—It seems to me that this committee has discharged its duties in a most admirable way and provided a Constitution and By-Laws that will meet with the approval of every member of this Society, and I therefore move that it be adopted as a whole. It will take a great deal of time to read and adopt each article separately.

Dr. Paul B. Barringer.—Before this is done, I would like as a member of the committee to say that we would like some advice, and we were not satisfied ourselves as to the state of affairs. The duties of the Secretary and Treasurer respectively, we would like to ask the advice of the Society on. In this instance the Secretary collects and the Treasurer holds. I am not absolutely sure and would like some expression of opinion from the Society as to it. Can any of you give me the experience of the North Carolina Society? I know pretty well what we have in Virginia.

The President called for remarks on the subject, and Dr. Johnston moved that the Society adopt the report of the committee as it stood.

Dr. Barringer.—I am perfectly willing to accept that. The initiation fee is left absolutely blank.

Dr. W. L. Robinson.—I don't see how we can adopt that as a whole until these provisions are made, and I move the adoption as a whole, except those things which the committee desires advice upon.

Dr. Geo. W. Long.—The committee desires advice and time for discussion.

Dr. Jos. A. White.—I move to amend the Constitution as submitted, that discussions of papers be limited to five minutes to each speaker instead of ten minutes, and no one be allowed to speak more than twice on the same subject.

Dr. J. N. Upshur.—I think Dr. White is making a mistake in making as short a limit as five minutes. Very few men speak more than five minutes, but sometimes on an important question it is impossible to lay down the principle facts of the subject in five minutes, which is a very short time. It is a very good thing to cut off a discussion that isn't pertinent to the question in point, but when an interesting question is up that rule might prevent some very useful things being said. A man might be just getting to the point where he was making his point in the discussion.

Dr. White.—The reason I made that motion is because in the light of experience, all of our Societies have adopted that limit. The American Medical Association is limited to five minutes, and our own State Society is limited to five minutes, because we have found that a man can make his point in a five minutes talk just as well as in ten, and uses fewer words and saves time. Time, when you have forty papers to read and discuss as you have here, is a very important item.

Dr. J. C. Tompkins.—There is an important exception for the reason that the first day of the Society is set aside for one subject alone according to the Constitution.

Dr. Hugh M. Taylor.—May I ask about setting aside the first day of the meeting for the discussion of some special subject?

Dr. Tompkins.—The entire day is for the discussion of some special subject to be designated by the President about a month previous to the meeting.

Dr. Barringer.—If Dr. Taylor will allow me, it is moved that the meeting of the Society shall occupy in the main three days each session. During the first day there will be taken up for consideration some subject announced at the previous meeting, and as much of the entire day will be occupied with the discussion of those papers as there are papers present to discuss. Of course, if it only takes two or three hours, it is a special order so long as there is any material on that subject. After that the general order of discussion begings.

Dr. Taylor.—I would like to ask, Mr. Chairman, if you had not better state as much of the first day as is necessary shall be utilized for that subject, as I would understand from that that the first day is to be devoted exclusively to it.

Dr. Barringer.—I am not the Chairman of that Committee, but the phraseology there is that that subject shall be made a special object for discussion the first day.

Dr. J. W. Long.—May I rise to second the motion to amend made by Dr. White? I feel sure he is right in saying that ten minutes is too long for any one man to discuss a paper, and that is the rule that obtains certainly in a large majority of the Medical Societies over the country. A man who has anything to say and has clearly defined ideas as to what he wants to say, can easily express himself in that time, and to go beyond the limit of five minutes takes up so much time for the discussion of each individual paper that the Society is crowded and interesting papers must suffer because of the lack of time to read and discuss them

properly, so I approve most heartily Dr. White's motion. I second his motion.

Dr. W. L. Robinson.—I move that the time of reading a paper be changed from thirty minutes to twenty. That has also been changed in most Societies, and it is ample time for the important points to be made.

Dr. White.—I understood twenty minutes and not thirty. I want Dr. Robinson's amendment carried also in addition to my own.

President Cobb put the motion to the house of limiting the debate to five minutes and the papers to twenty minutes. Motion prevailed.

Dr. C. W. Kollock.—I would like to ask for that part of the Constitution to be read that refers to the initiation fee, whether it is meant that there shall be an initiation fee and the annual dues in addition.

Pres't Cobb.—An annual fee in addition. The first year one fee pays for the initiation and the dues.

Dr.Kollock.—It seems to me that the yearly fee would be sufficient for that one initiation and for the yearly fee also, for if we make it too large we will keep out a certain number of men. We must remember there are a great many medical societies, and these things amount to a great deal with many men, and if we make it too high it will keep away many good men who would otherwise join. I would suggest a change there and say five dollars a year,

Dr. Barringer.—In speaking for the committee, I will say that we left that open, but I don't think the committe will agree exactly with Dr. Kollock. I would say an initiation fee of say blank dollars and one-fifth or one-sixth or one-tenth of that annally would be more satisfactory. While the committee didn't express their views on that subject, I think that was their desire.

Dr. Geo. W. Long.—The committee submits then a five dollar initiation fee and two dollars annual dues after the first year.

Dr. Hugh H. Taylor.—I hope the committee will not make the fees that way. In the first place, I do not see that we will need a great deal of money in this organization unless we do differently from most of the similar organizations and try to publish transactions, which is very much out of vogue at the present time. The journals are ready and willing to publish the papers as read before the Society and the dues are low, and only those societies in which there are volumes of transactions published require a large fee. Take the American Medical Association for example. What do you get from this Association? One of the best weekly journals in the country,and membership in the American Medical Association. I myself think three dollars annual dues will be large enough for the present needs of the Society, and that amount can be increased from time to time if three dollars is not enough.

Dr. J. G. Tompkins.—I would say for the enlightenment of the doctor that the committee has decided to put the annual dues at two dollars after the first year, five dollars covering everything for the first year, and two dollars per year after that.

Dr. White.—That is three dollars initiation and two dollars annual dues.

Dr. George W. Long.—The first five dollars cover everything for the first year.

Dr. White.—That is three dollars initiation fee and two dollars annual dues. An initiation fee is never annual dues.

Dr. Kollock.—I have no objection to and do not oppose the last report of the committee. I didn't know that it was not their object to publish transactions. I didn't know transactions were out of vogue, and I think almost all Societies publish transactions yet, but if that is not the object of the Society the two dollar fee is sufficient, so I shall not oppose that.

Dr. Tompkins.—The phraseology is that each member on initiation shall pay an initiation fee of blank dollars which shall include his dues for the first year. Each member shall pay in advance annually the sum of blank dollars, etc.

Pres't Cobb.—As I understand it, the motion is made to insert the initiation fee and annual dues shall be five dollars for the first year, and thereafter the annnal dues shall be two dollars.

The President put this motion before the Society, and it was voted down.

Dr. Barringer.—To simplify matters and endeavor to meet the wishes of all parties, I would make for the Committee a recommendation that the membership fee and annual dues be for the first year three dollars and thereafter one dollar per year.

Dr. White.—As I understand it, there can be no objection to two dollars per annum. We can not have any objection to that. If you have an initiation fee, it must have a fixed specific value. Then the annual dues are separate and distinct. If you put the initiation fee at three dollars and the annual dues at two dollars, it will be five dollars the first year and two dollars every year afterwards.

Dr. J. W. Long.—As that report has been rejected, I think we had better say nothing about the initiation fee, but I move that the annual dues be two dollars, payable in advance.

Pres't Cobb put this motion before the Society, and it was carried.

Dr. J. W. Long.—The motion was that the annual dues be two dollars payable in advance, so when a man joins the Society he must pay his two dollars and no initiation fee.

Dr. Barringer.—That is the way the committee understands it.

Dr. White.—I move that we have an initiation fee of one dollar in addition.

Dr. Geo. W. Long.—Dr. Long's motion has been adopted and I can submit that this matter is settled, and he explicitly and expressly stated that there was no initiation fee, but that each member should pay two dollars in advance.

Dr. Paulus A. Irving.—We have done this thing rather hurriedly. I don't think the gentlemen have considered the matter. You haven't got enough money now to run this Society. If you undertake to print transactions, though it has not been determined yet whether you will do that, then the two dollars initiation fee won't print the transactions, won't pay the postage or buy stamps, or anything of that sort. I think we had better reconsider, and as a silent voter, I move a reconsideration. I have just been talking with Dr. Register here, and he says it will take at least three hundred dollars to print the transactions. Now, there is quite an element here who favor printing transactions. If you don't want transactions printed, you need not reconsider the motion.

Dr. Geo. W. Long.—I understood we werer not going to have transactions. I will admit it will cost a great deal of money.

President Cobb.—We can determine that on the vote of reconsideration.

Dr. Geo. W. Long.—Provided these reconsiderations are made by men who have voted in the affirmative.

Dr. Geo. Ben. Johnson.—The question of publishing transactions is one, it seems to me, that we will come to a little later on. The Council after canvassing this matter will make a recommendation to the Association. If the Council deem it desirable that the Association should publish transactions and make that recommendation, it is a perfectly simple thing for the Association to rescind the action based upon Dr. Longs motion and to increase the initiation fee. I think it desirable, therefore, in order that our business may be expedited, that we pass this matter for the present with the understanding that if it becomes desirable to take it up latter we can do so.

Dr. Irving accepted Dr. Johnson's suggestion and withdrew his motion.

Dr. Upshur.—I suggest that as a result of a good many years observation of the cost of Medical Societies and other societies, there is absolutely no more unpopular thing than the raising of dues after they have been fixed. It is very popular to lower dues, but very unpopular to raise dues. The whole thing turns upon what amount of money the Society will require and to fix the annual dues at such an amount as will answer the demands.

Dr. Barringer read "Each member shall pay an annual fee of two dollars in advance," as being the vote of the Society as the Committee understood it, and stated that if any change was desired, of course the committee was at the order of the Society.

Dr. White.—The only thing is to decide if we shall have an initiation fee. I move simply one dollar as an initiation fee. Personally, it makes no difference to me whether it is one, two, three or five dollars. We should fix it at such a sum as is necessary to get the amount needed. I am willing to accept any amendment to my motion that any member wishes to make, so we have some initiation fee.

Dr. Johnston.—We have the dues set forth already, and it seems to me we have put the cart before the horse. We don't know what our needs will be until we determine what our work is going to be, and I think, therefore, all this talk is superfluous. We might as well go on and adopt our Constitution and By-Laws, and when we ascertain what our needs will be we can provide for them.

Dr. Upshur.—I move the action of two dollars be rescinded until we adopt the By-Laws and find out what the needs of the Society will be. Then we can fix the dues.

Pres't Cobb.—It is moved and seconded that the action fixing the fee at two dollars in advance be rescinded.

The question was so put before the Society, and the vote appearing to be about the same for and against it, a division was called for.

Dr. Upshur.—I would like to say by way of explanation, I do not wish to delay the proceedings at all, but simply to get at this thing in a business way. We are obliged to have a certain amount of money to conduct the business of this society, and if we go to work and fix the dues and initiation fees at a certain sum, and then have a certain amount of work to be done, and then your dues don't amount to that, you start out with a debt on the Society. It seems to me it is simply a business principle to have an income which is commensurate with what we need that income for. When we know what we want to do, we will be

in a position to know what those dues shall be. They should be as low as they can be for defraying the expenses of the Society and keeping it out of debt.

Pres't Cobb.—We have wasted a great deal of time on this. Dr. Upshur's motion is very much to the point. All favoring the motion to pass over that portion of the By-Laws referring to initiation fee, as a division was called for, will please say "aye."

The motion was carried.

Pres't Cobb.—What is the next section on which the Committee wishes instruction?

Dr. Barringer.—I believe there is no other section in doubt. When we bring in the report, we will endeavor to bring in two forms, one with transactions and fee that shall embrace transactions, and one a fee that shall embrace the lowest possible amount on which the Society can run without transactions.

Paper was read by Dr. A. B. Knowlton, of Columbia, S. C., on "Simultaneous Blood-washing and Blood-letting in Uræmia."

"A Plea for the Earlier Recognition of Pulmonary Consumption," was the title of the next paper, read by Dr. Louis F. High, of Danville, Va.

Dr. James M. Parrot, Kinston, N. C., read a paper on "The Treatment of Urethral Discharges."

A paper, "Remarks on the Relation of Diet to Hay Fever and Asthma," was read by Dr. John Dunn, of Richmond, Va.

Dr. Geo. W. Long, of Graham, N. C., read a paper on "Appendicitis Complicated with Intestinal Perforation."

Dr. W. L. Robinson, of Danville, Va., read a paper on "Diagnosis and Treatment of Tubercular Peritonitis."

The Society adjourned to meet at 10 o'clock on Thursday morning.

THURSDAY MORNING.

At 10:30 o'clock Pres't Cobb said: The Tri-State Association will please come to order. The first business in order is the report of the committee on Constitution and By-Laws.

Dr. J. G. Tompkins.—That report has all been adopted with the exception of the amount of the fee, and we can't decide on that until we ascertain from the Association about what the expenses will be. If it is decided that the Proceedings of the Association are to be published in pamphlet form, it will take more. I am the only representative of the committee here, and we can't do anything with regard to that fee until we get the sense of the Association as to whether or not the Proceedings shall be printed in pamphlet form. In addition to printing the Proceedings, or Transactions, etc., the By-Laws and Constitution will have to be printed, and we will have to make a calculation on that before we can judge about what the fee will be.

Dr. J. N. Upshur.—Mr. President, to put this thing in shape before the Society I would move, Sir, that the Transactions of the Society shall be printed.

This motion was seconded, and Dr. Upshur continued:

I have thought very maturely on that subject, and I am satisfied that it is a thing necessary absolutely to the well-being of the Society that its Proceedings shall be printed. In the first place, a great many of the Societies, the State Societies at least and I believe the Tri-State, many of them, do print their transactions. To print the transactions and put the Proceedings of the Society in compact form is of very great value to the members of the Society at any time that they may want to refer to any paper which may be read before the Society for any purpose, either for practical use as in connection with the work in cases to which it might bring them help. If those papers are simply published in the journals, they are scattered, and it is impossible for him to keep track of the papers where they are published. No man can do that. It is a valuable collection to any man's library to have these papers for reference, so it is important to us as members of the Society to have these papers in compact form for personal use. But there is a reason which to my mind is more urgent than that, and it is that for a Society to print its transactions gives it dignity and place and position with the other sister Societies throughout the country, and I don't see how we can take the rank we ought to take unless these transactions are put in such shape as to bring the work of this Society materially and clearly before our Associations throughout the country who are going to inspect and pass upon and review the proceedings of the Society. So I believe it is an absolute necessity for the vital well-being of this Society that their transactions shall be printed.

Dr. Hugh T. Nelson.—Mr. President, I think what Dr. Upshur says is true in a great many respects, but I saw yesterday that there was a very serious objection to the publication of transactions. We are just now beginning to organize, and the probabilities are that in pushing a measure of this kind, it is going to make our initiation fee or our annual dues rather a burdensome matter, that we are going to do harm to our organization in its very attempt at organization, and for that reason I do not

think this question ought to be put at the present time. It is true that the transactions would be valuable on the shelves of our libraries as a matter of reference, and it would be a matter or pleasure to me to have a volume in compact form, printing every paper that is read. But it would entail an expense that we can't consider. It is not going to be done with a less fee than five dollars a year. This would drive men away from the Society, because the gentlemen who oppose this Society are members of three or four Societies, State, county, and others, and for that reason, while I would like to have these transactions in a compact form on the shelves of my library for reference, I am opposed for the reasons I have stated to having proceedings published.

Dr. J. A. Burroughs.—I am a modest gentleman and seldom have anything to say. But it is my idea that it will be a mistake for the Medical Society not to have its transactions published in pamphlet form. I want to say in the beginning that I have no paper to read at this Society, and I hope it will be many a day before I will have one; but if we don't publish the transactions of the Society, the papers will be scattered and will be lost, and we will not get a large membership, and it will be difficult for us to get papers. If we want to make this Society a useful organization, not only to members but to others who may chance to have the transactions, we must have the proceedings of this meeting published in pamphlet form, just as our Tri-State and our State organizations have published, and we will prize the copies highly and keep them in our libraries, and especially the charter members of this Association will prize those copies. I for one, sir, am in favor of making the initiation fee as it is in several organizations that I belong to, five dollars including the first annual dues, the first year's dues. I doubt if that will cover all the expense. The men who have joined this Society, I unhesitatingly say, are public sprited men of the profession of three different States. They are men who will not stand on the difference of three dollars in regard to having the transactions published, but are men who are willing to pay it and glad to pay it in furthering the interests of the medical profession. And I want to put a motion to the Society if it is in order, and I want to put myself on record as supporting the five dollar admittance fee including the first year's annual dues.

Dr. Hunter McGuire.—I think we will make a mistake in not printing our transactions. It would show a lack of dignity and strength that would be fatal. In the first place, a great many men wouldn't write a paper and come here and read it to an afternoon assembly of a very few members. It would hardly pay that man to go to the trouble to write a good paper to have it wasted in that way. I think we would start out with the greatest mistake we could possibly commit not to direct that our transactions be published.

Dr. I. W. Faison.—I haven't signed the register yet, but I think I will, and I want to rise to second Dr. Upshur's motion. I think it is right and proper that every Society should publish its transactions. We can publish our transactions in pamphlet form to start with and they can be bound afterwards. We can publish them at quite a normal fee. There is no need of the transactions of this Society costing over a hundred or a hundred and twenty-five dollars. There are a great many societies starting anew as this one has that failed to publish transactions, and would give five times what they cost to have them now. Therefore I think this Society should learn in enlightened day that it is almost necessary to publish their transactions, and the Society will always be grateful to itself if it should publish its transactions.

Dr. Chas. W. Kollock.—I don't think we can consider for a moment not publishing transactions of some kind. It will never do for the papers to be scattered throughout the journals and we will never get them together and they will never do this Association any good. Members wishing to come in want to see the transactions. We would have to say, "We have no transactions." Then again it seems to me there are only two plans which we can consider, either publishing them in the form of Transactions, or in one of the three journals, then the members who want them would have to subscribe to tbat journal which would amount in the end to what they would have to pay for the transactions, and then that would hardly be a feasible plan unless the journal was known as the Journal of the Tri-State Medical Association. I can only say that as far as the expense is concerned, we have only two or three hundred members of our State Society. Our annual dues are three dollars a year, and we have now about a thousand dollars in the bank above all expenses, and our transactions were printed without any advertisements on the back of the cover.

Dr. Upshur.—I would like to ask Dr. Earnest Levy if he can make a statement of what would be the cost of two hundred and fifty copies of the transactions. He is the editor of a medical journal and in touch with printing and can give us some practical information on the subject that would give

us something to work on. We have on our roll about one hundred and fifty members. The five dollars annual dues would give us an income of certainly six hundred dollars allowing for those who fail to pay, and I am inclined to think that the publication of that number of transactions could be done inside of that figure without any difficulty to the Society and leave a balance in the treasury which would defray the other current expenses of postage, etc.

Dr. Levy.—Replying to Dr. Upshur's injuiry, I would say it all depends on the number and size of these transactions. I would say it would cost about $1.50 or $1.25 a page of the common long primer type. I don't see that it could be less. One thing about our present meeting is that the volume of our transactions, owing to the large number of papers, is certainly going to be utterly unproportionate to our present membership. Other Societies with two, three, four, or even six times the membership that this Society has have not large volumes of transactions. I should think the volume of our transactions this year would certainly come up to 250 or 300 pages, and would cost certainly not less than two hundred and fifty dollars this year. This would be my estimate on it and it would probably be nearer three hundred dollars.

Dr. Hugh M. Taylor.—I think the Society is convinced that it is in debt already in sending out letters, stamps, etc. Dr. Irving told me yesterday that we owe about eighty dollars now. I think the program of this society is probably as long as that of our State Society. The transactions of our State Society cost between $600.00 and $700.00.

Dr. Levy.—The cost of publishing a larger number would not be proportionately large, as the great cost is that of sitting up the type. The additional number of volumes is simply the additional cost of paper, press work and binding.

Dr. Taylor.—I do not think, Mr. President, we will diffuse an interest in this Society by publishing transactions. What I mean, we will publish a limited number of transactions that will be a benefit to our Society. The American Medical Association and a number of other Societies do not publish transactions. I am perfectly willing to publish them, but I think we will be simply in debt if we start out on a less sum than $500.00.

Dr. James M. Parrott.—I think as a matter of historic record we ought to publish the records of this Society. A few years from now we would like to have a record of these. In reference to the cost, according to Dr. Levy's estimate, I should think we could publish the transactions for $400, and that with a membership of a hundred and fifty at five dollars each would give us a revenue of $750. I think it is our duty to publish transactions.

Dr. W. L. Robinson.—If we don't start right in this business we are going out, and it looks like a picayunish piece of business to start without any transactions. It seems to me that with 150 members at $5 apiece, we ought to publish 250 or 150 copies of our proceedings. Now, another thing we have talked about here is the number of papers we have got. The majority are very short papers, not many of them are long papers. A great many of them have not come in. Some of them have never been written, and you will find, I am satisfied, that when you come to publish these things you will not have such a large volume. And I do hope this Society will uphold its dignity and have its transactions printed.

Dr. Robinson's remarks were heartily applauded.

Pres't Cobb then put Dr. Upshur's motion before the Society that the Society should publish its proceedings annually, and the motion was carried.

Dr. Upshur.—I move to carry out this idea that the assessment, the dues, of this Society shall be five dollars per year and no initiation fee charged.

Dr. Levy,—I think this is an equally serious question with the other. We have quite a problem before us. If we have a high initiation fee we must count on a small membership for the Society. On the contrary, with a low annual due we can safely count on a large membership, and will probably get in the same amount of money with a small fee that we would otherwise with a large fee, and would in addition have a membership that would be a credit to an organization of this character. I think it ought seriously to be considered whether it is not to our advantage to have a low fee with a large membership rather than a small membership with a high fee.

Dr. Upshur.—I want to say one word. It is not human nature, we don't appreciate anything we don't pay for, and the man who wants to belong to this Society is willing to pay five dollars to do it, and a great many good men will join this Society and pay the dues of five dollars cheerfully. The fees of our local Society in Rhichmond are six dollars a year and there are twenty-four meetings a year. We don't have any transactions published at the end of the year, either, and this thing of charging a dollar, or two dollars, is a thing perfectly absurd. The members of this Society will take an interest in it and we will have a good mem-

bership at a fee of five dollars. I think less than that would be inconsistent with the dignity of the Society, and this will give us a revenue that will enable us to do what is necessary and compatible with the dignity of the Association.

Dr. White.—I move to amend the motion and make the annual fee three dollars and the initiation fee two dollars, which I am satisfied will give us more money in the end than the five dollars dues. A great many men whom we would like to have in this Society will stay out simply on account of the five dollar fee, men to whom two dollars is a matter of some moment, and I therefore move to amend that proposition and make the annual dues three dollars and the initiation fee two dollars.

Dr. Upshur.—I will accept that amendment.

Pres't Cobb submitted Dr. Upshur's motion, as amended by Dr. White, that the annual dues should be three dollars and the initiation fee two dollars. The motion prevailed.

Dr. J. W. Long.—I want to ask the privilege of introducing to this Society one of North Carolina's most distinguished sons, an ex-President of the North Carolina Medical Society, a surgeon who is well known not only in the State but outside of our State—Dr. H. T. Bahnson, of Salem.

Dr. Bahnson.—I am certainly obliged to Dr. Long for what he meant, and I accept the courtesy with a great deal of pleasure, though I came rather to hear than to be heard.

Pres't Cobb.—I extend to you the courtesy of the floor, and will be glad to hear from you at any time. Can the Committee make its report now?

Dr. J. G. Tompkins.—I am the only member present and would like to ask time to report at the afternoon session.

There being no objection, it was ordered that the report be deferred until the afternoon session, and the Society proceeded to the regular order of business.

Dr. David A. Stanton, of High Point, N. C., read paper, subject: "Dystocia."

Dr. J. G. Tompkins submitted the only clause of the Constitution that had not been adopted, relative to the time of paying annual dues, to the effect that any member who shall fail to pay his annual dues within one year shall lose his membership.

The Constitution was then adopted as a whole.

Dr. Upshur.—I move that we go into the election of an Executive Council. The probability is that the Society will get through with its work this afternoon, and if we delay the election of the Executive Council until this afternoon, we will be very much hampered, because this Council will have to report the nominations for officers, and if this Executive Council is elected this forenoon they will be ready to report this afternoon, and the business of the Society will be facilitated. I therefore move that we go into an election of the Executive Council.

Dr. Upshur's motion was carried, and the committee was requested to read that portion of the Constitution referring to this election.

Dr. Barringer read for the committee, "The Executive Council shall consist of nine members, three from each State, and from those elected at the primary meeting three shall serve three years, three shall serve two years, and three shall serve one year." The length of terms is to be determined by the number of votes received, but always the members of the Council shall consist of three from each State. As a member of the committee, I would call the attention of the Society to this.

Dr. Kollock nominated from South Carolina, Dr. J. G. Tompkins, Dr. S. C. Baker and Dr. A. B. Knowlton.

Dr. Upshur nominated from Virginia, Dr. Paul Barringer, Dr. Hugh M. Taylor and Dr. George Ben. Johnston.

Dr. Barringer.—One member shall be elected from each State to serve three years. There must be in the primary election a differentiation, as there must be one man from each State for three years. As I understand it—I speak without conferring with other members of the committee—the man getting the highest number of votes shall serve three years, the man the next highest number shall serve two years, and the man who gets the next highest number shall serve one year. The result is that there will be a vacancy from each State of one member of that Council each year.

Dr. Crowell.—It seems that there is no one to say anything from North Carolina. I think I shall put in nomination Dr. E. C. Register, Dr. D. A. Stanton, and Dr. John Whitehead, of Salisbury.

Other nominations were made as follows:

From South Carolina—Dr. C. W. Kollock.

From North Carolina—Dr. J. C. Walton, Dr. W. H. H. Cobb, Dr. J. W. Long.

From Virginia—Dr. A. S. Priddy, Dr. Hugh T. Nelson, and Dr. W. L. Robinson.

Dr. George Ben. Johnston.—When this organization was first spoken of there was some opposition to it in Virginia, and I dare say the same kind of opposition was felt in North and South Carolina. The President alluded to this in his address of yesterday.

It was charged by those who opposed the organization that this Society was gotten up for the benefit of medical schools and specialists. I was somewhat unwilling to go into this organization in the outset, because I really did not see that there was any necessity for the formation of a Society of this kind. However, later on I became convinced that this Society could exercise a good influence; that it could be made a valuable Society, and, therefore, I consented to join, and I am more than delighted at the prospects I have witnessed since attending this initial meeting. Now, in order that this charge may be disproved, I think it proper that these gentlemen who made it should see that such was not intended. The three first nominated are all professors in the medical colleges of Virginia, and I, therefore, want to request Dr. Upshur to withdraw my nomination as a member of this Council.

Dr. Barringer.—Before the Doctor answers that request, I want to say that I agree perfectly with Dr. Johnston, and Dr. Johnston's views have expressed so fully my own feelings with regard to the matter that I will say nothing more than to request Dr. Upshur also that he will withdraw my name.

Dr. Hugh M. Taylor.—I attach no importance to the petty little insinuations that have been mentioned in this connection. At the same time, the matter of who is elected is certainly a matter of no small moment to the Society, and I wish to add my request to what Dr. Barringer has said and request Dr. Upshur to withdraw my name.

Dr. Upshur.—It gives me great pleasure, Sir, to comply with the requests of these gentlemen. In doing so, I would say in justice to myself and in justice to my colleague, Dr. Johnston, as well as Dr. Barringer and Dr. Taylor, I wish to emphatically disavow here that the idea that a medical school existed anywhere in the State of Virginia was in my mind when I made these nominations, that I did it from the simple fact that I thought I had selected men who had hustle and go in them and ability to work in this Executive Council. I knew what was in Dr. Johnston in the matter of organization and ability for the purposes of this Executive Council and believe he would be a valuable man, and I believed Dr. Barringer and Dr. Taylor would also be valuable men, but I am the last man anywhere with a suggestion even that medical colleges, or anything that has got to do with medical colleges should come into this Society. They are fully able to take care of themselves, I believe. The Medical College of Virginia is able to take care of itself, and the medical profession are paramount to petty quarrels or insinuations or anything connected with medical schools or individual medical men, and it is for the advancement and the good and the welfare of the profession and as a help in the discharge of their duty to humanity that these medical organizations are organized, and by God's help will be pushed to a successful issue.

Dr. Weaver.—I think it very proper that the Western section of North Carolina be represented on this Council, therefore I put in nomination Dr. Burroughs, of Asheville.

Dr. J. C. Walton.—I believe we ought to exercise some wisdom, as our Virginia brethren have acted so nobly in the matter of the selection of this committee, and I think it best to nominate one from each section of the State. We have Dr. Burroughs, a good man from Asheville, Dr. Register here in Charlotte, then the east would be entitled to some man, and I would nominate Dr. Oscar McMullan.

Dr. Faison.—Dr. McMullan is not here.

Dr. Munroe.—I would like to make one suggestion on the matter of the North Carolina representation and the geographical distribution of it, and as we want a man from the east I hope that the Society will vote for our president.

Dr. Walton withdrew his nomination of Dr. McMullan.

Dr. Burroughs.—I wish my name to be withdrawn and Dr. Weaver's substituted.

Dr. Weaver.—We will not submit to that.

Dr. J. W. Long.—I think my friend, Dr. Parrott, nominated me, and as my associate, Dr. Whitehead, has been nominated, I request that my name be withdrawn.

Dr. Parrott.—I will state for Dr. Long's benefit that the reason I nominated him was because Dr. Whitehead was not present. If Dr. Long will consent, I will refuse to withdraw his name on that ground. If he insists, of course I will do so, Mr. President.

Dr. Kollock requested that his name be withdrawn.

Dr. Upshur.—If you want who is present, I would nominate Dr. John H. Claiborne, of Petersburg.

Dr. Levy.—There being only three nominations from Virginia, it has just occurred to a gentleman here who has asked me to put it before the meeting, it is necessary to ballot on these three men on account of the fact that the one getting the largest number of votes will serve for three years, etc.

Dr. Barringer.—I see the difficulty growing out of the nominations from Virginia, and would therefore nominate with great

pleasure and unction, Dr. Robinson,of Danville, and Dr. Upshur, of Richmond.

Dr. Upshur.—Did I understand Dr. Barringer to nominate me? I am one of those unfortunate people in a medical school and I couldn't possibly serve after having made a few remarks here this morning on the subject.

Dr. J. M. Fladger was put in nomination from South Carolina.

Dr. George Ben. Johnston.—I want to make a motion in reference to Virginia. It is not likely that any gentleman who is in nomination from Virginia will receive a larger vote than the others. The probability is that the three candidates will come out with an even vote, and I therefore move that the Secretary be instructed to cast the ballot for these, and that they draw straws for their term, the gentleman getting the longest straw to serve three years, the next longest two years, and the one getting the shortest straw to serve one year.

Dr.Upshur.—I would like to suggest that in drawing those straws that the straws be of different lengths and each one be told which is his straw.

Dr. White moved that nominations be closed.

Secretary Irving.—It gives me great pleasure to cast the bollot of Virginia for, Dr.W. L. Robinson, Dr. Hugh T. Nelson, and Dr. A. S. Priddy.

Dr. Priddy said that as he was the youngest member, he would take the short term.

Dr. Robinson.—As I am the next youngest member I will take the two year term.

Dr. Johnston.—The objection these gentlemen manifest to drawing straws is more than likely due to the fact that there isn't a julip at the other end of it.

The ballots were cast for members of the Executive Council from North and South Carolina, and Dr. Levy moved that as there were some papers to be read yet, that the tellers be allowed to retire and make their report later.

Dr. W. T. Woodley, of Charlotte, had not prepared his paper, but addressed the Society on "Application of Electricity to Diseases of Women."

Dr. J. C. Walton and Dr. A. B. Knowlton discussed Dr. Woodley's address.

The tellers made the following report of election of Executive Council:

North Carolina—Three Years: Dr. J. W. Long; Two Years: Dr. J. A. Burroughs; One Year: Dr. E. C. Register.

South Carolina—Three Years: Dr. S. C. Baker; Two Years: Dr. J. G. Tompkins; One Year: Dr. J. M. Fladger.

Virginia—Three Years: Dr. Hugh T. Nelson; Two Years: Dr. W.L. Robinson; One Year: Dr. A. S. Priddy.

On motion of Dr. J. W. Long, it was decided that this committee should meet in the court house thirty minutes before the afternoon session.

Dr. L. G. Frazier, of Youngsville, N.C., read a paper on "Ovaritis; Acute and Chronic."

The next paper on the program was that by Dr. Hunter McGuire, but as he had not expected his paper to be called so early, he had left it at the hotel, and asked permission to read it by title, or to read it at the afternoon session, saying that he preferred to read it by title as it was quite long, or he would now give a synopsis of it.

The Society voted to have Dr. McGuire read his paper at the afternoon session.

Dr. H. B. Weaver, of Asheville, N. C., read a paper on "Modern Views on the Nature and Treatment of Pulmonary Consumption."

On motion of Dr. Barringer, it was ordered that remarks on Dr. Weaver's paper be deferred and made a special order for the afternoon session,

Dr. D. O'Donoghue.—The Charlotte Medical Association will tender a banquet to the members of the Tri-State Association at 10 o'clock at the Buford Hotel. Any member who wants to be present can get tickets at Dr. Register's office.

Secretary Irving read the following communication:

To the President of the Tri-State Medical Association, assembled in Charlotte, N. C.:—*Dear Sir:* Elizabeth College hereby extends a hearty invitation for the members of the Tri-State Association assembled to visit the College sometime during the present session of this Association. We would consider it both a pleasure and an honor to receive your distinguished body at the College. Most respectfully,

C. B. King, President
of Elizabeth College for Women.

On motion of Dr. Kollock, the Society instructed the Secretary to thank the President of the College for his kind invitation.

On motion of Dr. Barringer, the Society adjourned to meet at 2 o'clock.

THURSDAY AFTERNOON.

The Society was called to order at 3:30 o'clock.

The first business was the discussion of Dr. Weaver's paper, which had been deferred from the morning session. Drs. Levy, Burroughs, High, McAnally and Upshur discussed this subject, the discussion being closed by Dr. Weaver.

Dr. Munroe moved that Dr. McGuire be

requested to read the paper that he did not have with him before dinner.

Dr. Hugh T. Nelson asked permission first to read the report of the Executive Council: There was full attendance, all nine members, three from each State, were present, and they elected Dr. Hugh T. Nelson, Chairman, and Dr. J. W. Long, Secretary.

The Committee made the following nominations:

President—Dr. W. H. H. Cobb; Vice-President, from Virginia—Dr. W. L. Robinsou; Virce-President, from South Carolina—Dr. C. W. Kollock; Vice-President, from North Carolina—Dr. H. B. Weaver; Secretary—Dr. Paulus A. Irving; Treasurer—Dr. Paulus A. Irving.

The Council recommends that the Secretary and Treasurer be allowed the actual expenses connected with the discharge of his official duties; also, that the temporary officers be reimbursed for the expenses they have incurred in the organization of the Society.

The Council further recommends that the Society hold its next regular meeting in Charleston, S. C., at some date to be determined upon in the future by the Executive Council.

The Committee recommends the following as the subject for discussion as prescribed in the By-Laws, for the next annual session: The Southern Negro—

(1) His Hereditary Tendencies, as learned from his race history in America and Africa.

(2) His Racial Fecundity; the influence of climate, city and country life.

(3) His Race Mortality; in childhood, in adult life, in city and country.

(4) His recent erratic tendencies; the cause, suggestions as to prevention.

Dr. Nelson.—It is just suggested to me by a member of the committee as to the expense of having the two offices of Secretary and Treasurer, would incur a great deal of correspondence between the two officers and an extra expense that, for the present at least, we would recommend a practical consolidation of the two offices, and, therefore, we thought it best not to elect two officers, but only one. In our judgment it seemed best to take that course.

President Cobb.—Gentlemen of the Tri-State Medical Society, you have heard the report of the committee. All the report is before you except the first section.

Dr. Hugh M. Taylor moved that the report of the committee as a whole be accepted.

Dr. Nelson.—It is moved and seconded that the report of the committee, particularly the first part of it, be hereby ratified by this convention.

Dr. Taylor's motion, as seconded by Dr. Nelson, was unanimously carried.

President Cobb.—I am not a speaking man. It is an honor unexpected and an honor undeserved. I heartily thank you for this expression of your confidence, and hope you will bear with my infirmities.

Dr. A. S. Priddy.—In as much as two of the three temporary officers have been honored by re-election, and the temporary treasurer was not re-elected for economic reasons, I move that the thanks of this Society be tendered Dr. H. H. Dodson for his efforts as treasurer of the temporary organization for effecting permanent organization.

Dr. Priddy's motion was unanimously adopted.

Dr. H. H. Dodson.—I have to thank the Society for the action in this matter, and I heartily agree with the committee that it was the best thing under the circumstances to do, and as for the labors laid upon myself they were certainly very light as you know. I have not much cash remaining in my hands.

Dr. Hunter McGuire read his paper on Treatment of Cancer of the Breast."

Dr. J. W. Long.—My paper is next on the program, and while it would take only a few minutes to read it, I recognize the lateness of the hour and that there are quite a number of distinguished gentlemen here from a distance, so with your permission, I will just read my paper by title and give place to our visitors.

Dr. George Ben. Johnston.—Dr. White is anxious to get off on the evening train, and if you will allow it I will exchange places on the program with Dr. White.

There was no objection, and Dr. J. A. White, of Richmond, read paper. Subject: "Headache—Ocular and Nasal."

Discussed by Drs. Kollock, Kuyk, Dunn and Davidson.

Dr. George Ben Johnson of Richmond, read Paper, subject: "Report of Two Cases of Nephrectomy.

Discussed by Drs. Robinson, Flippen and Parrott.

Dr. Kollock, read a paper, being "The Report of a Case of Complete and Partial Ophtalmoplegia of the Right Eye."

Dr. Kollock exhibited two photographs, one taken before the trouble and the other showing the eye after the trouble had developed.

Secretary read the following papers by title:

Brief Report of Cases: by Dr. J. S. Brown, Salisbury, N. C.

Some Practical Points in the Treatment

of Diphtheria; by Dr. R. D. Garcin, Richmond, Va.

The Medical Examining Boards of North Carolina and Virginia, Their Relation to Each Other and the Profession; by Dr. A. S. Priddy, Keysville, Va.

State Institutions for Epileptics; Dr. W. F. Drewry, Petersburg, Va.

Examination of Feces as Aids to Diagnosis; Dr. H. S. McLean, Richmond, Va.

The Medical Treatment of Appendicitis; Dr. Chas. B. McAnally.

Secretary Irving.—I notice that the Executive Council have brought in a subject for discussion at the next annual meeting of this Society, but they have made no provision as to who shall lead in that discussion or prepare the papers.

President Cobb.—It is the duty of that Executive Council to select a member of the Society upon each heading. A special discussion I think is incubent upon them to suggest to this Association the member of the Society who shall write a paper under each separate head.

Dr. J. G. Tompkins.—Speaking for the Association, I think it was understood that this was to be a general discussion and the entire first day's meeting devoted to it if so much at that time was necessary, but we didn't understand that we were to designate who were to prepare the papers; that it was the sense of that committee, as we understood it, for everyone to take it upon himself and make a study of it and to say on it whatever he could.

Dr. Hugh T. Nelson.—I believe it is customary after a subject has been selected in medical societies to appoint somebody to open the discussion, or to elect him, as the case may be, and with that idea in view and that the whole subject may be studied and discussed by different members of the Society, I would nominate as the leader in that discussion Dr. Paul B. Barringer.

Dr. Paulus A. Irving seconded this nomination and amended Dr. Nelson's motion that it was really the sense of the Council that Dr. Barringer be selected as the leader and to select his assistants.

The amendment was accepted and the motion was carried.

The Society then adjourned to meet again at 7:30 o'clock.

NIGHT SESSION.

The night session was held in the parlor of the Central Hotel, the following being the order of business:

Dr. W. H. Wakefield, of Charlotte, N.C., read a paper on "The Eye as a Causative Factor in Functional Nervous Diseases," which was discussed by Drs. Kollock and Kuyk.

"Treatment of Fractures," was the subject of paper read by Dr. Hugh T. Nelson, of Charlottesville, Va. Discussed by Drs. Bahnson and Johnston.

Dr. E. C. Levy, of Richmond, Va., read paper on "What Medicine Owes to Bacteriology." Discussed by Drs. Weaver, Burroughs and Kollock.

Dr. Dirk Adrian Kuyk, Richmond, Va., read paper on "The Influence of Chronic Nasal Occlusion on Cerebration." Discussed by Dr. W. S. Davidson.

The following Committee on Publication was appointed:

Dr. Hugh M. Taylor, Richmond, Va.
Dr. J. N. Upshur, Richmond, Va.
Dr. Paulus C. Irving, Richmond, Va.

Lead as an Abortifacient.

A fatal case of lead-poisoning from the use of diachylon pills taken for the purpose of bringing on a miscarriage is reported by Dr. George F. Crooke in a receent issue of The Hospital. The case, when seen, presented symptoms so much more formidable than those which are commonly observed in ordinary chronic lead poisoning that we think it desirable to draw attention to the aspect which lead poisoning may take on when it assumes the form of what is spoken of as lead encephalopathy, as it does under some circumstances. The patient was a young married woman 23 years of age. She was lying on the floor raving in maniacal delirium, struggling violently with those who were endeavoring to restrain her, and apparently writhing in great agony Her seizures were paroxysmal and her intelligence was quite gone. Her breath was fœtid, and exceedingly offensive; the tongue was dry, and coated with a greyish, black fur; blackened sordes had collected about the teeth and gums, along the free border of which there was a distinct, slaty-blue line. The patient soon lapsed into a condition of coma. on which convulsions of a violent nature supervened. She seemed blind, and, on examination, both optic discs were found to be quite choked. The urine when drawn off was found to be acid, contained albumin, leucocytes, and a few red blood-cells and cellular and hyaline casts. She died two days later, never having thoroughly regained consciousness. From the time that the coma and convulsions set in there was considerable rise of temperature. She had miscarried about a week before this condition of affairs came on, but on the post mortem examination there was no evidence of inflammatory mischief about the uterus.

Dr. Crooke says that the practice of taking diachylon in the form of pills, for the purpose of bringing on miscarriage, is far more prevalent among the working classes than is generally supposed, and that, in view of the known effects of lead upon the nervous system, the nature of some of the obscure nervous disorders, with attendant anæmia which occur in women who have admitted miscarriage, may be cleared up by bearing in mind the possibility of lead poisoning from the criminal use of diachylon. The less acute forms of lead poisoning are so much the most frequent that we are all apt to associate plumbism with colic or wrist-drop, or with early decrepitude and albuminuria, as it occurs, for example, among painters. The more serious forms, lead encephalopathy, in which convulsions and coma occur, leading rapidly to death, are rarely seen by the mass of practitioners; but such cases are known well enough to those who practise among operatives who are exposed to the more deadly forms of lead poisoning. Not only, then, should the possibility of acute plumbism always be borne in mind, but it should be remembered that the onset of this form in young women is often masked by symptoms so slight and apparently functional, as to be very apt to throw practitioners off their guard. Hysteria, in a woman exposed to lead-poisoning, is a matter to treat with much caution.

The Treatment of Gout by Alkalies.

As the result of a careful series of experiments in regard to the action of alkalies in gout, Dr. Arthur P. Luff comes to the conclusion (The Hospital, June 18, '98) that the ordinary alkalies, the lithium salts, piperazine, and lysidine do not exercise any special solvent effect on sodium biurate, and their administration with the object of removing uratic deposits in the joints and tissues appears to be useless, and, moreover, it is apparently contra-indicated in gout on ccount of its leading to an increased formation of uric acid in the kidneys. It must, however, be noted that Dr. Luff's investigations were made by means of laboratory experiments, and although these appear, for the time being, to knock on the head the theory which has in many cases been the excuse for the administration of these remedies, they by no means touch the fact that many patients, suffering from various manifestations of gout, are better both in health and temper while taking alkalies. How these act is another matter. Dr. Luff has shown that they do not act in the way that they have been commonly supposed to do, but there is nothing in his paper to show that they have no benefical influence. This must be decided by clinical observation.

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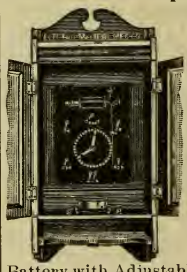

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Iodoform is universally regarded as such an excellent healing agent, that claims of superiority over it for Nosophen may appear as an exaggeration, but there is indisputable clinical evidence that it causes a wound to heal more rapidly, and with less or no suppuration; moreover, it never produces a dermatitis around the edges of a wound as Iodoform always does, Nosophen being absolutely non-toxic and non-irritating. Besides as a surgical dressing in major and minor surgery, it is adapted to other most varied employment, as an antiseptic in the treatment of chancroid and all abscesses and ulcers, herpes, eczema and other skin diseases, either as a powder or, combined with vasaline and lanoline, as an ointment; Nosophen is a strong desiccant and excellent results are obtained with insufflations in purulent discharges from the middle ear, in nasal catarrh, etc.

Eudoxine (The Bismuth Salt of Nosophen).

This chemical salt of Nosophen is intended for employment as an intestinal antiseptic and as such it gives most excellent results. To judge from clinical reports, it is decidedly an efficient intestinal antiseptic, and has the great advantage of being absolutely harmless and non-irritating, odorless and tasteless. Indicated in typhoid fever, chronic intestinal catarrh, diarrhœa of phthisis, infantile diarrhœa, chronic enteritis, etc.

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Quinine Hæmoglobinuria.

Murri reports a case of this affection (British Medical Journal):

A girl, aged 17, contracted tertian ague in July, 1898. In spite of treatment she was not cured in January, 1894, and was still taking quinine. At that time she had an attack of ictero-hæmoglobinuric fever directly after taking quinine, and subsequently whenever quinine was taken such an attack was observed, consisting in rigors, vomiting, followed by smoky urine, and lastly jaundice. The spleen became larger and firmer, and sometimes the liver enlarged also, with hypochondriac pain. At the beginning of an attack there was simple polyuria, then from being acid the reaction became alkaline, and lastly peptone, serum albumin, globulin, hæmoglobulin, and urobilin, hyaline casts, epithelial renal cells, and leucocytes, but no red corpuscles or bile pigments appeared. After an attack the above all disappeared, the serum albumin and peptone last. An examination of the blood showed there was a diminution of the number of red corpuscles, but the malarial parasite could never be found. In spite of this effect of quinine it had its usual influence in prolonging the interval between the attacks of true malaria. The author gives reasons for believing that quinine hæmoglobinuria occurs only in those whose organs have been altered by malaria, quinine alone being insufficient to produce it. (1) For 20 years he has been trying to produce quinine hæmoglobinuria in animals without success. (2) In a healthy man 75 or even 300 grains of quinine produce no hæmoglobinuria, while in this girl, after malaria, 1.54 gr. did with absolute certainty. (3) No case of quinine hæmoglobinuria has been reported which was not complicated by malaria. (4) The proof that one has not to do with an idiosyncrasy in a person with whom malaria is a coincidence is furnished by the fact that quinine intoxication appears in most cases sometimes after a good many doses have had to be taken—that is, after the malarial poison has had time to act on the organism, but not before. (5) It is not produced by an intolerance gradually set up by repeated doses of quinine, for large and repeated doses are often given in non-malarial diseases, and yet not a single case of quinine hæmoglobinuria has been reported in these. (6) This hæmoglobinuria is almost unknown in Europe, except in Sicily and Greece, and becomes relatively frequent in extra-European countries where malaria is more virulent. (7) The author's patient had three ictero-hæmoglobinuric attacks after the malaria was cured, and without any quinine having been given. This shows that the hæmoglobinuric mechanism had become so easily set in motion that its usually specific stimulus (quinine) could be replaced by others, though exactly what these were could not be discovered. It seemed as though the biological change left in the patient by malaria would not be permanent, for some months after the patient had been cured of her malaria, and had had no quinine attacks, a little over 1½ gr. of quinine given experimentally had very little effect, and even 7¾ gr., though causing intoxication (fever, albuminuria, peptonuria, and urobilinuria), produced no hæmoglobinuria.

Seaboard Medical Association.

The Seaboard Medical Association of Virginia and North Carolina met in Wilson, N. C., Jan. 12–13. The attendance was large. Very excellent papers were read which elicited an abundance of able discussion, especially the papers on Malarial Hæmoglobinuria. Officers elected for the ensuing year:

President, Dr. Lucien Lofton, Emporia, Va.; First Vice-President, Dr. George G. Thomas, Wilmington, N. C.; Second Vice President, Dr. John E. Philips, Suffolk; Secretary, Dr. John C. Roelman, Washington, N. C.; Treasurer, Dr. Charlas T. H. Laughinghouse, Greenville, N. C.

The next meeting to take piace sometime in midwinter. Place left to discretion of executive committee.

READING NOTICES.

Sanmetto in General Naso-Pharyngeal and Bronchial Catarrh Complicated with Gastro-Intestinal Catarrh—Also in Hypertrophy of Prostate, Dysuria and Painful Micturition.

I have used Sanmetto in my own case, i. e. general naso-pharyngeal and bronchial catarrh with the invariable complication in all such cases, gastro-intestinal catarrh, with the very best results, and I frequently prescribe it in such cases with the most satisfactory results. I use it in all cases of hypertrophy of the prostate, dysuria, difficult and painful micturition, and such as need to have the genital tract braced up, with the very best results. J. B. Duncan, M.D.

Bedford, Ind.

I have used Peacock's Chionia and find it very effective. I shall continue to prescribe it in my practice.

A. P. Dalrymple, M. D.

New York, N. Y.

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Antipruritic, Antiseptic,

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For Eczema, Erysipelas, Pruritus and all Itching and Inflammatory Skin Diseases.

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LITERATURE AND SAMPLES ON APPLICATION.

What to Inject in Gonorrhœa.

In an instructive paper, entitled "What to Inject and How in Gonorrhœa" (Wisconsin Medical Recorder, December, 1898), Dr. Ludwig Weiss, Attending Physician to the Skin and Genito-Urinary Department of the German Policlinic, New York, states that he cannot concede to the Janet method of irrigation the sure abortive and curative properties claimed for it. On the other hand, he thinks that it must be conceded that we possess in protargol a remedy which fulfills every indication required of an ideal antigonorrhoicum. This is attributable to its superior penetrating power due to the fact that it does not enter into insoluble combinations with the normal tissue fluids; to its freedom from irritation in solutions ordinarily used; to the fact that it destroys the gonococcus with absolute certainly, and that we can enhance its curative influence by prolonged application. The author's general conclusions are as follows;

1. Commence treatment as soon as possible.

2. Use prolonged injections of protargol.

3. Examine every other day at least, with microscope, whether gonococci have diminished.

4. Keep injections up until gonococci have vanished.

5. Astringents for the post-gonorrhoic flow are rarely necessary, as protargol acts as such also.

6. Irtigate when the posterior urethra is affected with one-fourth per cent. solution of protargol either by Janet's method or, better yet, with a large barreled, olive pointed syringe.

7. Protargol thus used cures gonorrhœa quicker than any other known remedy or method.

The Rational Treatment of Grippe.

The necessity of a powerful eliminant in every prescription for grippe is self-evident. While antipyretics and antiperiodics may somewhat stimulate the excretions and relieve congestion, thereby controlling certain features of the disease, a complete cure cannot be expected until the grippe poison is thoroughly eliminated and the diseased organs enabled to resume normal functions.

The successful treatment of grippe depends upon the thoroughness of the remedy employed, hence we ask why temporize with antipyretics and antiperiodics when Tongaline always secures prompt and efficient as well as permanent results.

The internal use of Tongaline Liquid taken at short intervals in hot water, washed down with copious draughts of hot water may be supplemented by its local application to the inner parts of the thighs and to the abdominal surfaces. Or as grippe invariably renders the stomach irritable and the nerves sensitive, the disturbing effects of internal medication can be entirely avoided by the external use of Tongaline Liquid alone.

In fact when the system is thoroughly under the influence of Tongaline, the progress of the grippe is arrested and as a result there is immediate recuperation, followed shortly by a perfect cure.

Intra-Nasal Diseases.

Speaking of Unguentine, we have found it an excellent application to the nose after the removal of spurs of the septum or anterior hypertrophies by either the saw, snare or cautery. Frequently the crusty scab which forms is the source of considerable annoyance to the patient and actually delays the healing process.

The frequent washing with alakaline solutions renders the tissues boggy and even then is not always effectual. A small pledget of cotton with the ointment applied to one side and placed in situ will promote a more rapid healing of the nasal tissues than any other method with which we are familiar. After a few hours a bit of the ointment may be applied frequently and the abraded surface kept comfortable as well as clean during the healing process.—*Atlanta Medical Weekly.*

Dr. Horace Tracy Hanks, New York, writes in the American Gynecological and Obstetrical Journal for December that from an experience with Nosophen of fully four years in his gynecological practice, he believes that this antiseptic powder has virtues equal to those of Iodoform, while it is odorless and should, therefore, supersede this vile smelling drug, and he believes it will do this eventually, as Nosophen is no more expensive to use, because of being so much more voluminous than Iodoform. Nosophen, he states, is a pale and yellowish powder, containing about 60 per cent. iodine in chemical combination with phenolphtalein. He fiuds it to act perfectly well in preventing excessive and rapid suppuration in all abrasions and erosions of the cervix, and on all raw surfaces after curettement. He uses Nosophen-gauze for packing the uterine cavity after removing the débris of an abortion and after curerting for other causes, the gauze packing remaining sweet for three days in such cases. Also on abdominal wounds the Nosophen-Gauze meets every indication of iodoform-gauze.

THE BEST PREPARED FOOD.
FOR THE BABY, THE INVALID, THE CONVALESCENT, THE AGED.
HIGHEST AWARDS WHEREVER EXHIBITED.
IT CONTAINS NO CANE SUGAR, NO GLUCOSE, NO MALT.
IMPERIAL GRANUM
NOURISHING
STRENGTHENING.
PURE
PALATABLE
SAFE
RELIABLE
IS THE STANDARD PREPARED
FOOD
OF TO-DAY
AND WILL CONTINUE
NEARLY ALWAYS SUCCESSFUL WHEN ALL OTHER KINDS OF NOURISHMENT HAVE FAILED.
SAMPLES FOR CLINICAL TEST SUPPLIED TO PHYSICIANS AND TRAINED NURSES ON REQUEST.
TO YIELD SATISFACTORY RESULTS IN NUTRITION
FAR INTO THE FUTURE, BECAUSE ITS MERITS HAVE BEEN
PROVED BY CLINICAL SUCCESS IN THE PAST.
Shipping Depot, JOHN CARLE & SONS, 153 Water Street, New York.
SOLD BY DRUGGISTS EVERYWHERE.

Well Known—Well Liked.

The other day the superintendent of one of the largest city hospitals in this country, said to a representative of The Imperial Granum Company, the manufacturers of that reliable dietetic preparation, IMPERIAL GRANUM: "It is not necessary for your firm to send any one here to tell me about their product for I have used it both in private and hospital practice for over twenty-five years, and can hardly believe that even the youngest members of the medical profession do not know of the merits of this well known and well liked food for invalids and convalescents."

Iquinin Remedies.

In the treatment of La Grippe many physicians have found the Iquinin remedies of great value. Generally the attack finds a constipated condition of system, and the Laxiquinin administered in doses of one to three tablets every two to fours, according to the age of the patient or urgency for purgation, will bring prompt results. The aching distressing break-bone pains will be relieved at the same time that purgation is being accomplished. After free evacuation of the bowels, the Iquinin may be given in doses of one to two tablets every two to four hours according to the age of the patient. This should be continued in diminishing doses for several days. After the subsidence of the acute symptoms, a severe case of La Grippe leaves a fearful depression of the nervous system, and potent tonics are indicated, and no better has been found than the Toniquinin tablets, one tablet three times a day. This may be given for from one to five weeks, as the case may require. Simple cases are often relieved, and often cured by several doses of Laxiquinin alone.

I take great pleasure in offering my testimony to the great value of Cactina Pillets, in cases of weak and irregular action of the heart. I have used them for four years and have never been disappointed in them. They not only stimulate the heart, but improve that organ permanently. I find them very useful in all cases of typhoid fever and pneumonia.

Kent, Ind. C. B. MATHEWS, M.D.

The Treatment of "LaGrippe" or Epidemic Influenza.

"La Grippe" is an infectious disease whose specific germ is a bacillus possessing the power of segmentation or subdivision, thus multiplying with great rapidity when a favorable medium is attacked. It is taken into the body from the atmosphere through the nose and mouth. Its action causes a congestion of the air passages (nose, throat and lungs), similar to catarrhal conditions.

But further, it causes severe constitutional disturbances which manifest themselves by neuralgias, muscular pains (myalgias) fever and chills; and causes congestion of various internal organs, leaving the patient debilitated with weak heart, neurasthenia and frequently with weakened lungs and kidneys. These latter conditions are often aggravated by remedies injudiciously taken during the course of the disease, and fatal terminations are sometimes traceable to the use of drugs which are calculated to further depress the already weakened system.

Bearing in mind the leading symptoms and tendency of this disease, it is wise to avoid any drug which will weaken the heart's action or depress the patient's vitality in any way. Most drugs used to relieve pain are depressing in their after effects. Most drugs used to reduce fevers are weakening to the heart's action. Many people take upon themselves the risk of dosing with phenacetine, antipyrin, antifibrin, etc. These drugs should only be used under competent medical advice, for cases of dangerous syncope have followed upon the careless partaking of these remedies.

Among the drugs practically harmless and at the same time efficacious can be mentioned quinine. This drug in small doses strengthens the heart's action and reduces fever besides acting as an internal antiseptic. As quinine in small doses alone will not relieve the pains or headache, nor entirely reduce the fever I have been in the habit of combining with it phenálgin as follows:

Quinine three (3) grains in capsules, Phenalgin five or ten (5 or 10) grains in powders at one dose, to be taken every three hours. This formula has proven very successful in aborting what might have been a severe attack of "LaGrippe," and rapidly curing milder cases.

In common with many of the profession, it had been my habit prior to my acquaintance with the stimulant non-depressant character of Phenalgin, to prescribe alcoholic stimulants when giving the other coal tar product, to overcome their depressing effect. But the free use of alcohol is always followed by great depression and reaction. The contrary is true of the coal-tar product Phenalgin. The action of this drug is soothing and its anodyne effect is usually followed by refreshing sleep.

Convalescence from "LaGrippe" is hastened by careful attention to nutriment and aided by judicious tonics of the chalybeate variety.

An efficacious method of local treatment for "LaGrippe" and at the same time often a most valuable preventative is to spray the nose and throat several times daily with one of the many antiseptic solutions in the market, of which the principal ingredients are boric acid, eucalyptol and other essential oils.

It should be remembered that this disease attacks with greatest severity those whose vital forces are made weaker by indiscretions and excessive nerve strain. Therefore the rules of health should be carefully observed, especially those referable to sleep and proper diet.

In giving these hints for treatment, it is not desired to assume that "LaGrippe" is a disease easily overcome without close personal attention by the physician, but there are very many cases which otherwise would become severe and serious, that could be checked by promptly following the course herein outlined.

J. A. Hofheimer, M. D., 323 W. 126th St., N. Y.

To the Members of the Medical Society of North Carolina.

As the Secretary has had a number of letters from members of the Society in regard to the Transactions for 1898, some public statement concerning them is doubtless admissible on his behalf. Dr. R. D. Jewett has had the minutes and papers of the 1898 meeting since last summer; he assumed all responsibility for their publication and distribution as he was secretary for the last meeting and one of the committee on publication, all of which was eminently fit and proper, and the purpose of this notice is simply to mention the facts in the case. All credit in regard to the Transactions for 1898 is due Dr. Jewett and to him all complimentary communications concerning them should be sent.

Geo. W. Pressly, Sec'y.

Notwithstanding the large number of Hypophosphites on the market, it is quite difficult to obtain a uniform and reliable syrup. "Robinson's" is a highly elegant preparation, and possesses an advantage over some others in that it holds the various salts, including Iron, Quinine, and Strychnine, etc., in perfect solution, and is not liable to the formation of fungous growths.

LISTERINE

The Standard Antiseptic.

LISTERINE is a non-toxic, non-irritating and non-escharotic antiseptic, composed of ozonifer ous essences, vegetable antiseptics and benzo-boracic acid.

LISTERINE is sufficiently powerful to make and maintain surgical cleanliness in the antisepti and prophylactic treatment and care of all parts of the human body.

LISTERINE has ever proven a trustworthy antiseptic dressing for operative or accidental wounds.

LISTERINE is invaluable in obstetrics and gynecology as a general cleansing, prophylactic- or antiseptic agent, and is an effective remedy in the treatment of catarrhal conditions of every locality.

LISTERINE is useful in the treatment of the infectious maladies which are attended by inflam mation of accessible surfaces—as diphtheria, scarlet fever and pertussis.

LISTERINE is especially applicable to the treatment of scarlet fever, used freely as a mouth wash, or by means of the spray apparatus.

LISTERINE is extensively prescribed in typhoid fever, both for its antiseptic effect and to im- prove the condition of the stomach for the reception of nourishment.

LISTERINE agreeably diluted, is prescribed with very good results, in the treatment of diph- theria, both as a prophylactic and curative—internal antiseptic—agent.

LISTERINE is used extensively with good results in the treatment of whooping cough.

LISTERINE diluted with water or glycerine speedily relieves certain fermentative forms of indigestion.

LISTERINE is indispensable for the preservation of the teeth, and for maintaining the mucous membrane of the mouth in a healthy condition.

LISTERINE employed in a sick room by means of a spray, or saturated cloths hung about, is actively ozonifying and imparts an agreeable refreshing odor to the atmosphere.

LISTERINE is of accurately determined and uniform antiseptic power and of positive ori ginality.

LISTERINE is kept in stock by the leading dealers in drugs, everywhere.

Lambert's Lithiated Hydrangea.

Close clinical observation has caused LAMBERT'S LITHIATED HYDRANGEA *to be regarded by Physicians generally as a very valuable* RENAL ALTERATIVE *and* ANTILITHIC AGENT.

Albuminuria, Lithæmia,
Bright's Disease, Nephritis,
Cystitis, Rheumatism,
Diabetes, Urinary Calculus,
Gout, and all forms of
Hæmaturia, Vesical Irritation

For Descriptive Literature, Address

Lambert Pharmacal Co.,

ST. LOUIS.

The Treatment of Pulmonary Phthisis.

The opinion has been held that the development of Phthisis is preceded and accompanied by appreciable disorder of the digestive system. Particularly is this true of Pulmonary Phthisis. It is now known that pyogenic germs work conjointly with the tubercle bacillus in disintegrating lung tissue.

In fact, the pus forming germs constitute the more formidable factor as to the force of invasion, as evinced by the remarkable experimental researches of Koch and Berlin. His tuberculin cure was indeed a sad disappointment for the reason that it simply attacked the tubercle bacillus and this to a minimum extent without in the least affecting the general phthisical dyscrasiæ.

With the lights of the day before us it seems consistent with good judgment to employ those methods at command which at least promise antisepsis constitutionally—notwithstanding the various methods in vogue during the past years for amelioration or cure in bacterial disease.

Cod Liver Oil is considered in this article as is customary, in connection with the medicinal treatment. It has, however, little or no claim to be classed as a medicine.

It has some adherents in the treatment of Phthisis yet the authorities of the day discourage it rather than use it. It often occasions nausea and diminishes the appetite or gives rise to eructations and in such event is absolutely contra-indicated. After all, it could under the best circumstances be considered only as an article of diet. When destructive changes in the lung ensue as in the stage softening, Cod Liver Oil is positively harmful for the reason that it produces fat intoxication.

Its combination with the hypophosphites has been pretty largely employed in different countries, but without effects sustaining any just claim of having specific action.

Pulmonary Phthisis, unless greatly advanced (i. e. both lungs involved extensively), is usually readily checked. The careful practitioner will recognize in this particular, the merits of Angier's Petroleum Emulsion, and antiseptic constituents are so eminently suited to diseased lung tissue and to the general system.

It does not tax the digestion—is always the most soothing and grateful to the patient and is perfectly assimilable. The Petroleum Emulsion is typically nutrient which is soon manifested by the increase of weight and generally improved condition of the patient. The gastro-intestinal tract is quickly responsive in activity and is not depressed nor irritated by its use.

Bronchial hemorrhage is not, as a rule, an unfavorable event in the case of Phthisis. It does not follow from this fact that the hemorrhage should not be arrested. This tendency to hemorrhage can best be controlled by the administration of Arsenic between the attacks. The Arsenical preparation selected by many competent observers is Arsenauro, the Liq. Bromide of Gold and Arsenic, in ten drop doses three times daily after meals. Here where it is desirable to continue the remedy for a considerable period the dose should not be increased. For obstinate diarrhœa the subgallate of Bismuth is useful.

Cough is of course necessary for the removal of the morbid products within the bronchial tubes and cavities. If the act of coughing be accompaneid by expectoration, palliation is not required. But often there is what may be called a superfluous cough. Frequently this prevents sleep. Palliative remedies are then indicated, and great care should be observed in this selection.

The following formula is most useful in allaying irritable cough and preventing night sweats.

Liq. Morphine (Magendie),	Gtt. xxx
Liq. Atropiæ B. P.,	Gtt. vi
Ac. Hydrocyanic dill.	Gtt. xxx
Ether Chlor.	ʒi

Syrup Prumi. Virg. or Symp Tolu.
M. S. ʒi. Pro re nata.

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Braddock, Pa.

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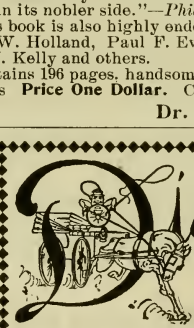

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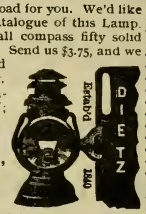

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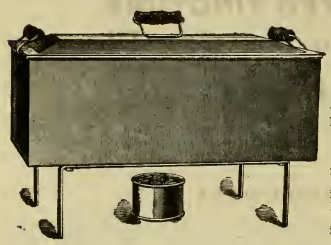

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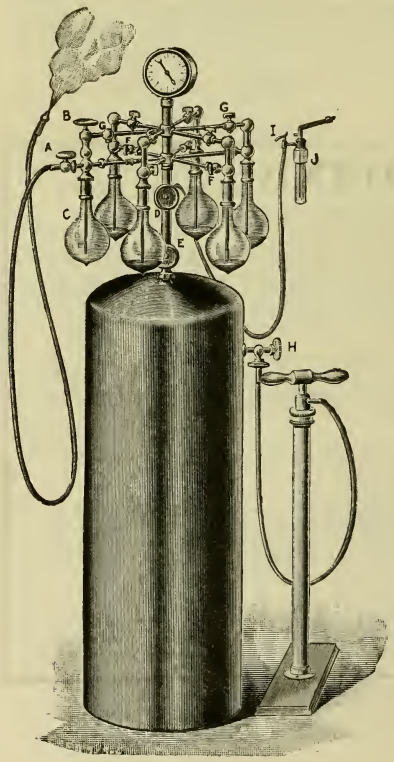

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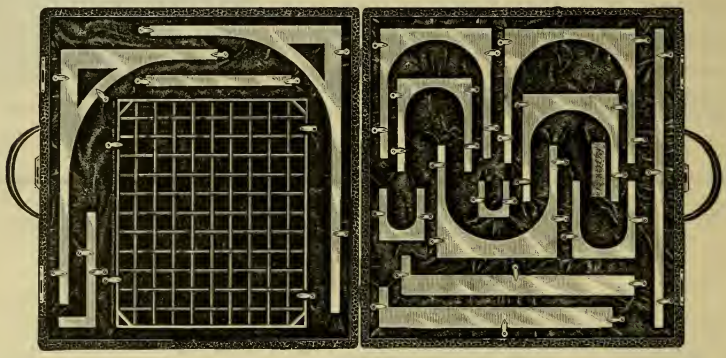

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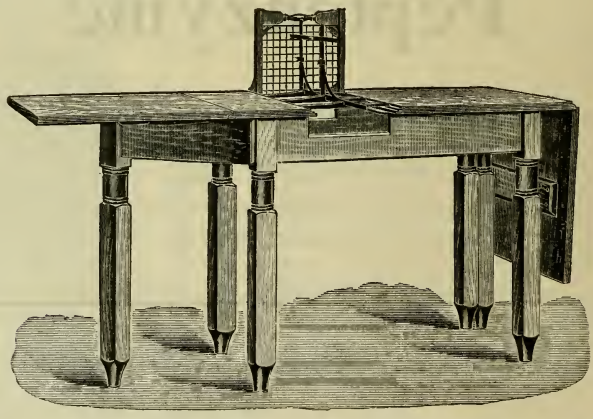

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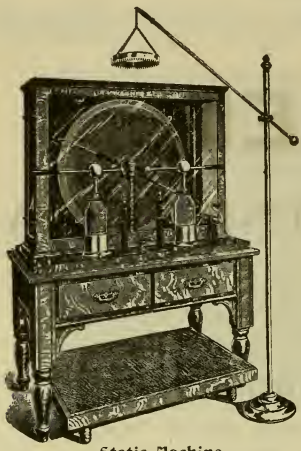

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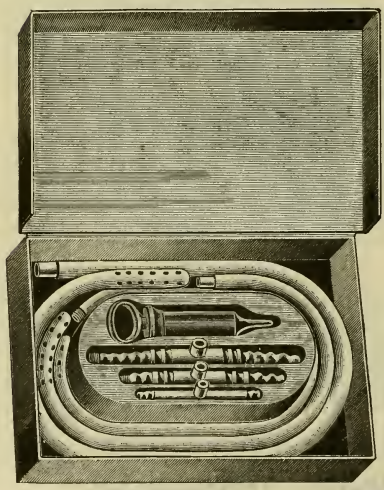

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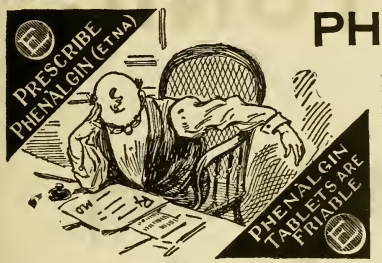

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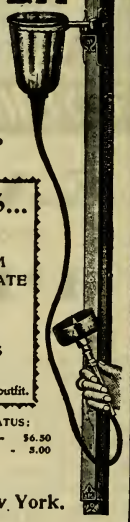

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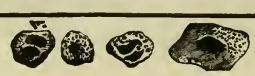

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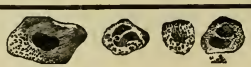

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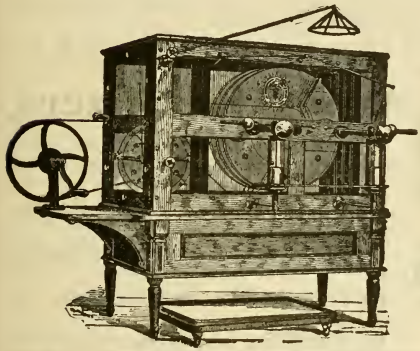

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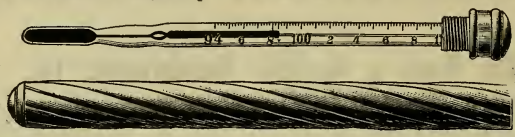

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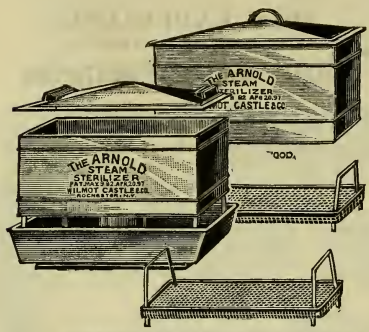

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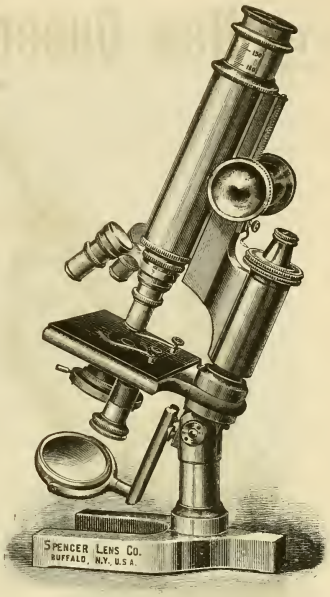

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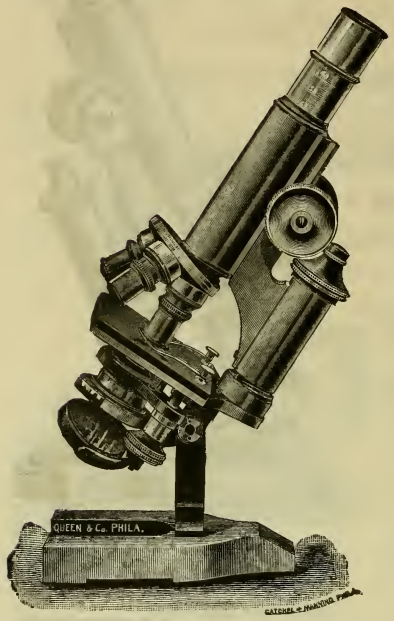

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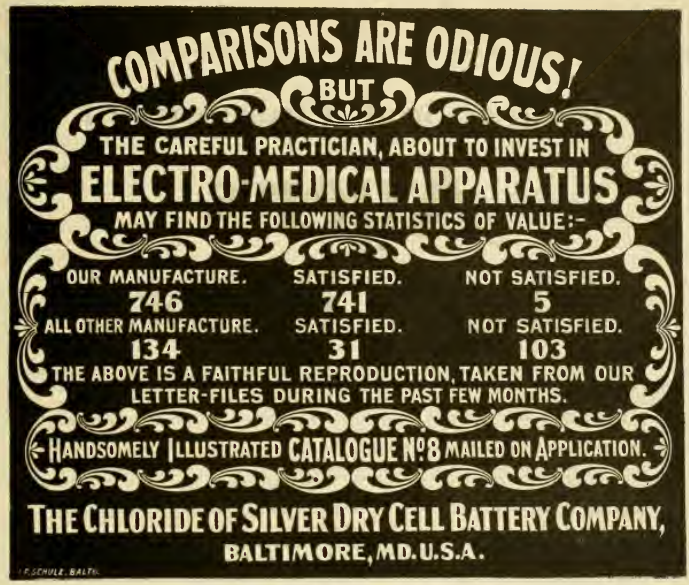

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Malignant Tumors of the Breast.†

By Hunter McGuire, M. D., LL. D., Richmond, Virginia, Professor of Clinical Surgery, University College of Medicine, Richmond, etc.

Malignant tumors of the female breast are so frequent, so dreaded by humanity, so little understood by pathologists, so fatal in their results, their treatment often so futile, and their early diagnosis so important, that every practitioner of medicine, as well as of surgery should be familiar with their symptoms, diagnosis, and, as far as we know, their treatment.

With the exception of the uterus, neoplasms more often form in the female breast than in any other portion of the human body; thus in 13,824 cases of primary neoplasm in both sexes, consecutively observed in several hospitals, 17.05 per cent. were in the breast—(males 25, females 2,397). In the same series of cases the neoplastic process had its seat in the uterus in 19.02 per cent. of the cases. (Diseases of the Breast, by Roger Williams). Indeed, it was found that 70 per cent. of all the neoplasms affecting women are in the uterus, breast and ovaries. This last result was obtained from observations in 9,227 cases. From this same careful observer (Williams), we gather the fact that in 2,432 cases of primary mammary neoplasm 81.07 per cent. were malignant and only 18.03 per cent. non-malignant.

Another striking fact is found in these statistics—namely, that neoplasms in general form 54.05 per cent. of cancer and 24.-07 per cent. of non-malignant growths; but in the neoplasms that occur in the female breast 77.07 per cent. are cancer, and 15.07 are non-malignant, showing that the female mammæ are relatively much more prone to malignant neoplasm than other parts of the body.

CAUSES.—The influence of *sex* is very marked; 99 per cent. being found in the female and 1 per cent. in the male, showing that rudimentary and functionless organs are not likely to take on the neoplastic process. No doubt the hyperæmia attending lactation, menstruation and parturition constitutes an important fastor in determining the disease in women. Statistics show that women are more liable to carcinoma in general than men. It is said that where 100 males die from cancer 223 women are destroyed by the same cause. Sex, however, does not influence liability to sarcoma. Williams found brunettes more frequently affected with cancer than blondes. To show the frequency of cancer of the mammary gland, Andrews collected 7,881 cases of cancer, and found of them 1,232 were cancer of the breast. The number of deaths in the United States in 1880 from cancer of the breast was 1,387. The left breast is said to be the one most frequently affected, but the difference between the liability of the two breasts to the formation of this neoplasm is very slight. In 1 or 2 per cent. of the cases both breasts were involved.

Billings has demonstrated an interesting fact from the statistics he has gathered—that the older and higher the civilization of a community the greater the number of cases of breast cancers; but he also adds, "a large proportion of cancer indicates that the locality is healthy, and a long settled one." He found in the New England States, and on the Southern Pacific coast, cancer quite prevalent. The same condition is observed in the central part of Michigan and in Southern Wisconsin. Roswell Park says that from various sources he finds that Buffalo, New York, is the centre of a country with a radius of two hundred miles, where the death rate from cancer is greater than in any other part of the United States. With grim humor he calls this area the "Tropic of Cancer." While no part of the world is exempt from the disease, it is evidently more common in some localities than in others. It is more frequent in Europe than in America, and relatively more common in the wealthy and easy going portion of the population in both countries than in the laboring and hard working people. Rayer states that cancer is less liable in herbivorous animals than in the carnivorous—the reverse being the case in tuberculosis. Beneke says that cancer is uncommon in prisons, where animal food is not abundantly supplied,

†Read before the Tri-State Medical Society of the Carolinas and Virginia, at Charlotte, N. C. January, 1899.

but it is noted also that vegetarians are by no means exempt from the disease.

Race.—It is stated by some writers that cancer of the breast in the negro is rare. In my experience it has been almost as common in the negro as in the white. This is confirmed by Dr. Matas, of New Orleans, who, in examining the records of the Charity Hospital found sarcomata (except melanotic sarcomata) more frequent in the negro, and carcinomas fully as common in the negro as in the white race. But the United States Census bureau reports show that cancer appears twice as often among the whites when compared with the blacks. In this country the disease is more common in Germans, then the Irish, and either of these races is more liable to it than natives of America. The Indians of America are singularly exempt from cancer.

Age.—The disease makes its appearance most commonly between 40 and 50 years of age. Gross gives the average at 48.66 years or about the menopause. Probably the neoplasm more often precedes than follows cessation of menstruation. The next most frequent period is between 50 and 60 years, after that, from 30 to 40, and last in frequency from 60 to 70 years of age. Occasionally cases are met between 20 and 30, but they are rare. I found one case in a young married woman of 19, verified afterwards by the microscope, and by the recurrence of the disease after an operation. It has been found that 80 per cent. of the cases occur in married women; and Bryan found that the more prolific the woman was the more prone she was to cancer.

Heredity.—Opinions as to the influence of heredity on the production of cancer are very conflicting, and as no accepted theory can be adduced by which this can be settled we are reduced to an examination of the results of statistics in carcinoma. Frequently statistics can be made to accord to the views of the individual employing them, but there are some statistics in regard to cancer which cannot be changed and are interesting and instructive. I will state the results of this investigation as briefly as possible. Williams says that 24 per cent. were due to heredity, Bryan 12 per cent. Gross 9 per cent., and Paget 33 per cent.

From statistics we gather: First, that either parent having cancer may transmit a liability to it to his or her descendants; that, as a rule, the mother is more apt to do this, as, in general, the mother is more apt to transmit her virtues and vices to the offspring than the father; that, as all nature has a tendency to return to normal rather than abnormal conditions, this tendency of cancer—as well as other diseases—grow less and less with succeeding generations. As instances of family cancer in successive generations, the following may be quoted:

Williams cites the case of a woman with uterine cancer, whose maternal grandmother, mother, mother's sister, and two sisters had all died of the same disease of the womb. Sibley, of a mother and five daughters, all of whom died of cancer of the left breast. The first Napoleon lost his father, brother and two sisters with the disease that killed him—cancer of the stomach. The celebrated case of Madame Z., recorded by Broca, is familiar to all. Madame Z. died of cancer of the breast. She left four daughters, all of whom died with cancer, and of twenty-six descendants who reached, or passed the age of 30, fifteen died of cancer.

I operated for cancer on the left breast of a very intelligent gentleman of Virginia, whose grandfather and father had died of cancer of the face. Two of this gentleman's brothers had died in the same way; and one sister, upon whom I had operated for cancer of the breast twenty years before, is still living and well. This gentleman recovered from the operation, and twelve years after died with cancer of the face. It is remarkable that in the case of the sister no recurrence should have taken place; and another interesting fact is that in the present very numerous descendants, many of them over 50 years of age, there should be no case of the disease.

Another interesting deduction from a study of these cases is, that the predisposition to cancer may be latent for many years, and at a certain time of life develop. Thus the four daughters in the celebrated case of Madame Z. were born fifteen, twenty-five, twenty-six and thirty years before the mother developed cancer, and yet all four died with this disease. It is also noted that cancer usually makes its appearance in the offspring when it reaches the same age that the disease developed in the parent. Sometimes one generation from cancerous parents entirely escapes, and the next generation, or grandchildren develop the predisposition to the disease. The rule is by no means invariable, but quite common, that transmitted cancer attacks the same organ in the offspring that was affected in the parent. Sibley's case, just related, is a striking example—the left breast in all the cases. Female relations are more apt to inherit cancer than the male. Tubercle, rheumatism and gout are often associated with cancer, and these diseases seem to be intimately connected. Another fact of great interest and importance is that cases of cancer in proportion to population are much more numerous than

formerly. The disease is rapidly increasing, while cases of tubercular disease, small pox, typhus and many other maladies have markedly diminished in number.

Traumatism.—Thirteen per cent. of the cases of cancer of the breast arise from this cause. I do not think there can be any question that traumatism has often something to do with the formation of cancer in persons predisposed to the disease. I too often see cases where the disease makes its appearance after a contusion has been received to doubt it. The injury may be slight—as striking against a bedpost in the dark—but the blow may be sufficient to set up the cell changes that develop the disease. In this way the broken stays in a corset may provoke some inflammation in the connective tissue, and the same cause may reproduce the cancer in the scar tissue after an operation has been done for carcinoma.

Mastitis.—Mastitis, especially if the inflammation leads to suppuration and the formation of scar tissue, may also predispose to the cell changes which end in carcinoma. It is estimated that 30 per cent. of all the cases originate in this way.

Mental Depression.—It is said that prolonged mental depression predisposes to cancer, and that individuals who for years dread the disease are more prone to have it. Great and continued mental depression, by producing impaired nutrition and lessening physiological resistance, may, it is easy to believe, conduce to the formation of the disease.

Location.—If two lines, one vertical and one horizontal, are drawn through the nipple, they will divide the breast into four segments. It will be found that cancer forms more frequently in the upper and outer segment than in the lower part, and least of all in frequency in the segment next to the sternum. As the outer edge of the gland is richer in acini than the central portion, carcinoma more often appears in the periphery of the organ. In 132 cases reported by Williams, 90 were peripheral and 42 central.

Types of Breast Cancer.—There are two forms of carcinoma of the breast—one known as ascinous and one as tubular. The former is by far the most common, constituting, according to Williams, 94 per cent. of all the cases seen.

The ascinous form of tumor, as its name implies, begins in connection with the acini, and the tubular, or "duct cancer," commences in connection with the ducts. The ascinous variety of cancer of the breast, which is so common, is subject to many histological changes, and this has caused some confusion in the classification of cancer of the breast in different works. It has been called, when the alveoli are large, alveoli cancer, but the name only tends to mislead, as all carcinomatous tumors have alveoli. When the tumor is hard and nodular, the stroma predominating—dense, indurated, scar-like in character, the cells inclosed in spindle-shaped or elongated alveoli—the variety is known as scirrhus. As a rule, the denser and harder the tumor, the less the malignancy.

When the cells greatly predominate, and the stroma—made up of fibres of connective tissue infiltrated irregularly with cells—is sparse, the tumor soft, growing rapidly, very malignant, it is called "soft, encephaloid, or medullary cancer." A rare form of ascinous cancer of the breast, sometimes attending pregnancy and lactation—but occasionally making its appearance independent of these conditions—is sometimes seen, which runs its course rapidly and ends in a few months in death. It is an acute type of the disease. There is no specially defined tumor but the whole of one or both breasts is involved. Beginning suddenly, the breast enlarges, becomes hard and taut, the skin red, painful, adherent, with enlargement of subcutaneous veins. Lymphatic involvement rapidly supervenes. Nothing more than palliative treatment can be done.

The common form of acinous cancer, to distinguish it from the last, may be called chronic carcinoma of the breast. This form requires years for its full development and termination. Between these two extremes of acute and chronic there are cases so rapid or so slow in their formation that it is difficult to say to which class they properly belong. Paget says the earlier the disease begins the more rapid its course. With an average of 43 years, they live 18 months. At an average of 51 years, life lasts from 18 months to 5 years. The disease beginning at the age of 56 to 57 years, they live from 3 to 8 years. I think it may be stated that a large proportion of cases, not operated on, die between 6 months and 3 years.

Another form of acinous cancer, characterized by its extreme chronicity, is called atrophic, which, according to Gross, constitutes 7.9 per cent. of all the cases met with. In this variety the neoplasm and whole breast undergo constant shrinkage. The epithelial cells undergo fatty degeneration and are absorbed, leaving a small, densely hard mass (stone cancer), knotty and irregular. From the mass are sent out hard, white, fibrous-like "roots," into the parts around; retraction of the nipple is common, and, later, fixation of the mass and ulceration. Occasionally, the disease is soon attended by lymphatic involvement

and cachexia, and ends life in a year or two, but as a rule it is very chronic and lasts for 10, 15, or 20 years. It is eventually fatal, and never followed by spontaneous cure. In some cases, the shrinkage is so great, of breast and tumor, that the part looks as if it had once been amputated, and there was nothing left but scar tissue.

Still another rare form is seen, called colloid carcinoma of the breast. This is when the cells, and probably the stroma as well, are filled with a gelatinous, nearly transparent matter and have undergone colloid degeneration. This form begins as a hard, small, solitary tumor, growing very slowly, tardily involving the skin and lymphatics, taking 10 or 12 years to run its course. In no other form of mammary cancer is general dissemination so slow. After a longer or shorter time, however, involvement of lymphatics, skin, and possibly the other breast, with general dissemination and cachexia, follow. The slowness is due to destruction of the cancer cells by the colloid metamorphosis. Recurrence is slow after operation in colloid cancer.

Another form of cancer of the breast, so rare that Williams, in 2,397 cases of primary neoplasm of the breast did not find a single instance, is known as melanotic cancer of the breast. The black or melanotic appearance is due to granules of melanin or hæmatoidin infiltrated into the cells and connective tissue of the diseased part.

In a case of melanotic cancer of a woman aged 60 years, at my clinic a few weeks ago, numerous melanotic growths were found on the back, both arms, and abdomen of the patient. The tumors varied in size from a garden pea to a large walnut. There was already axillary glandular involvement and general cachexia. No operation was advised, and the patient in a few months died from exhaustion.

Development and General Course.—Cancer of the breast usually begins as a hard, solitary lump in the mammary gland —so hard to the feel that it is often called scirrhous; never very large at first, possibly about the size of a pullet's egg or smaller, and rarely ever larger than a turkey's egg. An examination with the finger shows usually masses of hard fibrous-like tissue radiating from the central mass in different directions. When a section of the mass is made it cries under the knife like a raw potato and has about the consistency of that vegetable. When cut across the mass contracts, leaving the surface slightly concave. If the cut surface is gently scraped with a knife, a milk-like fluid is obtained. The cut surfaces have a dense, white, fibrous appearance, with here and there little fatty points. These fatty points are degenerated epithelial cells in the alveoli, and are characteristic of carcinoma. They are absent in sarcoma and in simple non-malignant growths. The periphery of the growth is not so dense or white as the central portion, but softer and elastic, grey in appearance, and covered with the natural fat of the gland. The tumor has no capsule, and its margins are difficult to define. It may be said here and there to be dovetailed into the adjoining healthy tissue, and isolated collections of cells may be found some distance from the tumor proper. When examined microscopically, columns of epithelial cells are found buried in dense, hard, fibrous tissue.

In about 6 per cent. of the cases of the acinous form of cancer of the breast, the tumor is soft, very vascular, and lobulated, growing rapidly, very malignant, and is known as "encephaloid," medullary," or "soft" cancer. In these cases, the tumor is larger, and lymphatic involvement rapidly supervenes, early ulceration takes place, and recurrence after operation is almost certain. According to Gross, death takes place, on an average in 8 months. At first the tumor may be firm and elastic to the touch, but later is soft, and at some points fluctuating from the presence of cyst formation. When cut into, it is soft and pulpy in consistency and succulent in appearance; but when microscopically examined, characteristic carcinoma is found. Its color is reddish grey, with whitish trabeculæ of fibrous tissue running across it in different directions. There is no envelope, but the tissues around are irregularly infiltrated by the cancer growth. So-called cancer juice in abundance is seen when the part is lightly scraped with the knife.

Duct Cancer.—Soon after the menopause, when the glandular tissue of the breast begins to undergo atrophy and the ducts remain, the latter become dilated, and have formed in them occasionally involution cysts. These cysts are small, and contain a mucus-like material. From the inside of these cysts, or from the undilated duct itself, cancer may spring. The terminal ducts are the ones most often involved. The tumor is generally single, and about the size of a walnut. When cut into, a distinct capsule, consisting of the dilated duct, is found, and within the cyst, and sprouting from the cyst wall, and more or less completely filling the cavity, is a reddish mass, showing a tendency to infiltrate the surrounding structures.

In this form of cancer, which is not common, the first symptom noticed is a blood-

stained discharge from the nipple; the nipple is more commonly retracted than in the acinous variety. The tumor is in the center of the breast just below the nipple, and never of very large size. It increases slowly. Lymphatic involvement is rare, or tardy in making its appearance; local recurrence after operation is not common. It occurs in elderly women.

Paget's Disease of the Nipple.—In this connection may be mentioned a disease which should not properly be classed as carcinoma of the skin, but its presence is so often accompanied with or followed by cancer of the breast that it is appropriate to speak of it here. It was originally described by Sir Jas. Paget, and is known as "Paget's Eczema of the Nipple." It rarely occurs in women under forty years old, and may follow confinement or lactation. The nipple and areola, the first seat of the disease, become intensely red and raw, exuding in abundance a clear mucus-like discharge. Sometimes a dry crust forms, difficult to detach. After being once formed it continues to spread superficially, and in depth, until the skin becomes swollen, raw and bleeding. After a time ulceration sets in, and a deep ragged ulcer is seen. At first the nipple is retracted, and eventually may be inverted. The disease may also enter one of the lacteal ducts, and a tumor be felt deep under the nipple. Some suppose the disease begins as duct cancer, and the eczematous appearance of the skin is due to the discharge from the nipple frequently attending this form of cancer of the breast. Others believe that the cancer extends from the surface through some of the lacteal ducts, and in this way cancer of the breast is formed. Glandular involvement is absent, or very late making its appearance. Prognosis is good if the breast is removed early.

Symptoms of Cancer of the Breast. *Pain.*—As a rule, in the early stages of cancer of the breast there is no pain whatever. Occasionally there is pain, and attention is called to the breast by this symptom, and the tumor discovered, but generally the growth is found by accident, and there is no pain until the disease has progressed for some months. It is a common belief that one cannot have cancer without pain, and many a woman has allowed cancer of the breast, or of the womb, to continue until her cure was hopeless, because what she, and possibly her physician also, considered the characteristic symptom of cancer—pain—was absent. In a few cases there is pain in the early stages, and why a few should have this symptom, and, under apparently the same circumstances, others should be free, is impossible to explain. While pain in mammary cancer is generally absent until the approach of ulceration, inflammatory swelling and non-malignant tumors in that locality are generally attended with pain and tenderness. After the disease has progressed some months, and especially when ulceration has begun, the pain is very severe. The patient has a constant, heavy, aching pain in the breast, but along with this, at short intervals, one that is sharp, burning, stabbing, or lancinating in character. This pain is characteristic of cancer; the patient will tell you that she feels as if a hot needle or knife had been thrust through the part, and that while the suffering is constant, it is liable to paroxysms of increased agony.

Retraction of Nipple.—Great stress was at one time laid on this symptom, but the practitioner should not forget that this condition of the nipple may be congenital, or come from some disease or injury in childhood, or results from chronic mastitis, or cold abscess, or accompany the growth of a benign tumor. It is only important as a sign of cancer when associated with other symptoms of the disease. Retraction is more common when the tumor is situated near the centre of the breast. When the lump is near the periphery of the gland, it is often absent altogether, or at least for many months. It is more common, also, in duct cancer than in the acinous variety. Gross found retraction of the nipple in cancer of the breast in 52 per cent. of the cases. He found this condition also in 5.02 per cent. of cases of benign mammary tumors.

Dimpling of the Skin.—In the early stages of cancer, the skin is freely movable over the breast and tumor; but, as the disease progresses, the fibrous tissue that connects the skin with the breast (the supensory ligaments of Sir Astley Cooper) are drawn upon and the skin is puckered. When the tumor is moved, it is seen that it is more or less fastened to the skin, and after a time, as the contraction of the skin goes on, a permanent dimple is seen. This symptom is important, as a similar condition is only found in chronic inflammatory affections of the mammary glands, attended then by involvement of the skin and other signs of inflammatory disease.

Diminished Size of Breast.—One of the most striking symptoms of cancer of the breast, is that when the two breasts are inspected it will be found that the diseased side is smaller than the sound organ—this, too, notwithstanding that the breast on the diseased side is occupied to a greater or less extent by the tumor. Contraction of the cancer mass not only goes on, but shrinkage

also on the whole breast, so that the organ is not only smaller in size than the sound one, but it is more tightly fixed to the chest and less pendulous than natural. In atrophic cancer, this condition goes on until the breast looks as if it had been removed and there was nothing left but a mass of cicatricial tissue.

Discharge from the Nipple.—Gross estimates this symptom in 7 per cent. of all cases of cancer of the breast. It is more common in duct cancer than in the acinous variety. The discharge, when it does occur, is slight, in quantity only two or three drops, sticky in character, and slightly milky in appearance. Occasionally, it is bloody. Other neoplasms also sometimes produce this discharge, as sarcoma, cystic disease, etc., and occasionally it attends an unhealthy condition of the breast due to diseases of the uterus and ovaries.

Nodulation and Ulceration.—If the case is not operated on,and the malignant growth removed, the dimpled and puckered skin may become in time red or purple and swollen, thickened and elevated, instead of being depressed as it has been; or, in other words, a *cancerous nodule* be formed. In a short time ulceration will set in, the thin red skin over the nodule be destroyed,and a *cancerous ulcer* appear. The ulcer is irregular in shape, deep, hard and excavated, and the skin around it intimately adherent to the parts beneath. The edges of the ulcer are hard and everted ;the surface is depressed and sloughing; the discharge from it thin, bloody and excessively offensive in odor, inflaming and excoriating the skin around.

Lymphatic Implication.—In some cases, in the ordinary acinous cancer of the mammary gland, the skin over the breast, and possibly for some distance around—more especially in the direction of the axilla—becomes red, swoolen, thickened and painful. This is due to dissemination of the cancer in the plexus of the lymphatics just below the skin, chiefly in the suspensory ligament. The cancer cells became rapidly diffused and all the cutaneous lymphatic branches are implicated. Sometimes small tubercles are formed (acute miliary carcinosis),or the infiltrations are diffused and constitute *carcinoma en cuirasse.* Very often, when the deep plexus of lymphatics are implicated and numerous cancer nodules are formed, the skin on the nodules, and between them, becomes thickened, tough and leatherlike in appearance. This condition is apt to follow cancer situated near the nipple, atrophic in character, is very malignant, and ends life in a few months (in from six to twelve months). At one time this was considered a distinct variety of carcinoma, but pathologists now regard this cutaneous change as a secondary transaction and one always preceded by primary cancer of the breast. The disease continues, involving more and more of the adjacent skin, which becomes very hard, dusky red, and tightly adherent to the parts below it. So constrictive does this *cuirasse cancer* often become, that it sometimes mechanically interferes with respiration.

Glandular Involvement.—No other gland in the body is so richly supplied with lymphatics as the breast. These lymphatics, deep and superficial, freely anastomose with one another, and usually in six months after the primary cancer had made its appearance, enlarged lymphatic glands can be felt in the region of the axilla. This enlargement shows that a cell, or group of cells, from the cancer may have found its way through the channels of lymphatics and found lodgment and growth in a neighboring gland. The arrest of the cancer graft by the gland has for the time prevented further cancer dissemination. The glands to become involved are those on the inside of the axilla and lying under the edge of pectoralis major. The glands that lie on the inner side of the great blood vessels and receive the largest vessels from the arm, and the glands in the back part of the axilla communicating with the lymphatics in the subcapular region, are not at first diseased, but as all the lymphatics in this region freely intercommunicate, the last also in turn become affected. So, also, owing to the anatomical arrangement, after a time the glands above and below the clavicle becomes diseased. Other branches of lymphatics pass through some of the intercostal spaces, and the retro-sternal glands may in the end become implicated, and as the system of lymph vessels of both breasts freely communicate, cancer of one side—especially if on the sternal side of the gland—may produce enlarged and diseased axillary glands on both sides, although only one breast is involved in the primary neoplasm.

While glandular dissemination is rarely observable before six months, or for a longer period than that, according to some writers, it is probable that the disease would be found at a much earlier period if a careful histological examination could be made. When first seen the glands are small, hard and painless, and they gradually and slowly increase in size and the number involved. Occasionally, one or two very large glands seem to spring up suddenly and enlarge quickly to a greater mass than the original tumor. The enlarged glands are not present in every case of cancer of the breast, and this absence does not show

that the disease is not cancer. Indeed, cancer of the breast may run its full course and end in death, and there may be no apparent glandular affection whatever; but this is rare. The chances of cure, after glandular enlargement appears, are materially lessened and the danger and rapidity of recurrence increased.

Adhesions.—Soon after, or concurrent with the appearance of enlarged and diseased glands in the axilla, the cancer tumor becomes attached to the pectoral fascia, and a little later to the pectoral muscle. This may be determined by forcibly extending the arm and putting this fascia and muscle on the stretch. While in this position it will be found, if adhesion has occurred, that the cancer mass can be readily moved laterally, but not up and down in the direction of the fibres of the muscle. In view of an operation, this information is important. In the fascia and muscle may be found small cancerous foci, left there by the lymphatics or by the blood vessels. These spots are often so small as not to be detected with the naked eye, but may eventually form the nidus for new growths. Histologically, these deposits are identical with the primary neoplasm.

Systemic Infections.—Some months after the glands show disease, systemic affection may be noticed. The time for this is variously stated by different observers from fifteen to thirty-eight months. Gross says the time of metastasis and systemic dissemination varies in different cases from one to three years. It is doubtless produced by cancer cells, or small masses of cancer detached from the primary growth or its derivatives, carried into the circulation, and finding lodgment in some vascular tissue or organ. No doubt cancer, as well as sarcoma, is sometimes disseminated in this manner; or, the cancer material may be taken up by the lymphatics, escape arrest by the lymphatic glands, find its way into the thoracic duct or some large vein—as the left subclavian—and thus gain access to the general circulation.

Secondary Cancer.—In this way it may find a lodgment in any organ or tissue except the non-vascular, as the cornua or cartilage, for metastatic deposits are never found in such structures. Many of these cancer emboli are probably destroyed and disappear, but some of them are deposited, live and grow—grow occasionally to a size immensely greater than the primary mammary neoplasm from which they had their origin. More frequently than any other organ, the liver is the seat of secondary deposit; next the lungs, pleura, bones, brain, ovary, in the order of frequency mentioned. Indeed, any vascular tissue or organ in the body may be secondarily affected. The metastasis may involve one structure or many. In this way the other breast may be involved, and it does not absolutely follow because both mammary glands are cancerous that very great systemic dissemination has taken place, and that the case is thus necessarily hopeless.

Bone Involvement.—While any bone of the body may be the seat of secondary cancer from primary breast cancer, the cranial bones are the ones most often diseased; next, the bodies of the vertebræ, the femur, and the humerus. The disease is usually in the medullary portion of the bone, and often the first information the patient has of its existence is spontaneous fracture of the bone—or fracture after slight muscular effort—there being little or no pain preceding it. When spontaneous fracture with evidences of cachexia are seen, cancer somewhere should be suspected and looked for.

Cachexia.—In the early stages the general health is not affected, and a patient with cancer of the breast may seem to be, to all appearances, in perfect health, but after a period that varies in different cases, signs of general toxæmia and impairment of health begin and continue to increase, if the patient is left to nature, until the end, death taking place usually from asthenia. The appetite is poor, emaciation comes on, weakness of body and mind are noticed, and the whole skin becomes pallid, sallow, waxy and tallowy in appearance. This muddy, straw-colored tint affects the skin only, and not the mucous membrane, or urine, as slight jaundice will; dyspepsia, constipation, possibly nausea, may be present. There is systemic infection, from the admission into the blood of cancer cells—altered or not, but too abundant to be eliminated—from the cancer breast, and the blood itself is changed chemically and morphologically. This cancerous cachexia is not necessarily fatal; removal of the primary cancer sometimes arrests it, and the patient, at least for a time, regains her original healthy appearance.

Varying Progress of Cancer.—Cancer of the breast varies very much in its progress in different individuals, As a rule, the younger the subject the more rapid and malignant the disease. When it happens in a woman under thirty-five years of age it is, in my opinion, doubtful whether any operation, however radical, will lengthen life or lessen suffering. The growth and malignancy is especially marked in young women who become pregnant; the increase in the supply of blood to the mammary gland during this period or during lacta-

tion will explain this. In these cases the tumor is usually soft and large and not attended with any contraction of the cancer tissue or the mammary gland. In old people the *acinous cancer often becomes atrophic* in character; and while it never gets well, the patient will often live for ten, fifteen or even twenty years, and may die from some intercurrent disease. In this type of cancer the enlarged glands in the axilla and systemic affection are slow and tardy in making their appearance; but it is well to remember that this form of cancer may suddenly become—especially if it is injured—acute and rapid in its course.

Modifying Changes.—Many of the symptoms of cancer may be modified by changes which sometimes occur during its development. Although devoid of nerves or function, it is liable to alterations by injuries or other causes that produce inflammation. Congestion, suppuration, ulceration or gangrene may ensue. Suppuration is rare, but after a certain stage of its growth spontaneous ulceration is almost certain to take place. This may begin in the deeper parts and extend to the skin, or it may involve the skin at the outset and spread to the deeper parts, or sudden interference with venous return, or some injury may result in gangrene. This may be moist or dry, partial or almost complete, and is attended by great suffering and imminent danger. Cystic degeneration may also occur and be the result of a hemorrhage into the mass, or some obstruction and dilatation of the ducts of the gland. Rare instances are also seen of *calcification* or *ossification* of the cancerous neoplasm. Occasionally in chronic acinous cancer, the disease, instead of steadily increasing as it usually does, shows symptoms of attempts at a spontaneous cure. The mass shrinks in size, becomes less painful, weak granulations form in the bottom of the ulcer, and some feeble attempts at cicatrization may be observed. This apparent arrest of the disease is temporary, and should not mislead the attendant into the belief that a spontaneous cure will result.

Recurrence of Cancer of the Breast.—Two cases of cancer of the breast are rarely, if ever, exactly alike. The disease in two women of the same age, degree of health, date of advent of cancer, with—as far as we can determine—the same morphological and pathological condition, will not pursue the same course. The relative malignancy differs. So also with recurrence of cancer after an operation has been performed. We cannot tell whether recurrence will take place or not. It has been said that the histological character of the cancer will tell. The more typical the stricture, the better the chance of exemption; the more atpyical, the worse the prognosis. So far this has not been proven.

We know that in a number of cases—no matter how complete the operation—the disease will return, and we know that when the subject is comparatively young, the cancer soft, or of old date, or the operation not thorough, the disease is almost certain to come back. Gross says that the average period of its return is 9.4 months. Williams has compiled a table of 599 cases, and shows that in 238 of these cases recurrence took place in three months, 117 within six months; that is, about 60 per cent. recurred within six months. Gross says that 22 per cent. were within one month and 8.9 inside of fifteen days. Winniwater's reports are even more discouraging, while Agnew (it is said) operated for the moral effect only, and believed the operation rather tended to shortened life than to lengthen it.

Since Volkman, however, directed attention to the absolute importance of a more radical operation in cancer of the breast, far better success has attended the surgeon's efforts. Recurrence has, in many instances, been postponed for many years, and absolute cures have increased in number. Now, no good surgeon is content to simply remove the breast in the old stereotyped way, but, in addition to taking away the whole breast with a large portion of the integument over the tumor, the axilla is freely opened, all the lymphatic glands are removed, and loose fat and cellular tissue carefully cut away. After this the fascia covering the pectoral muscle is carefully dissected off, not only on the surface of the muscles, but the prolongations of fascia that pass down between the bundles of muscular tissue; if diseased, the muscle itself is bodily removed. Since this radical procedure has been done, our success has been much greater.

No surgeon in this country has contributed more to our knowledge of the importance of a complete operation in cancer of the breast than Halstead, of Baltimore. He gives the details of fifty cases operated on in Johns-Hopkins Hospital, with a local recurrence in only three cases (6 per cent). By "local recurrence" he means return of the disease in the region attacked by the knife. "Regionary recurrences" are described by him as outbreaks of the disease in the skin at a distance from the scar, and are due to metastasis in the skin from the original growth. In 34 cases (63 per cent.) there had been no local or regionary recurrence. In 43 cases (93 per cent.) there had been no true local recurrence, and Dr. Halstead says that we have "reason to hope for

a brighter, if not a very bright future, for operations for cancer of the breast." All of these cases were operated upon in the same thorough way—one or both pectoral muscles, the axillary glands and those above and below the clavicle being removed. The report shows that cancer as a local disease may in many cases be permanently eradicated. Halstead removes in every case of cancer of the breast the large pectoral muscle, and, to prevent infection of the wound by pieces and shreds of cancer, he takes out cancer, fascia, muscles, glands, etc., as one piece.

As it has been demonstrated that for a long time the fascia covering the pectoral muscle protects, so to speak, the muscle from the spread of the disease; that the lymphatics are chiefly found upon the surface of the fascia; that the lymphatic current is from the muscle to the fascia and not the reverse; that the lymphatic vessels do not follow the blood vessels between the bundles of muscular fibres, it seems to me scarcely necessary or justifiable to remove the pectoral muscle in every instance, but only in those cases where the disease has spread that far. While I have removed with the breast both pectoral muscles, along with lymphatic glands of the axilla and supra-clavicular region, and prolonged the life of the patient, such cases should probably be regarded as inoperable, as remote infection by metastasis has likely already taken place. When macroscopic inspection shows that the axillary glands are involved, and that it is difficult or impossible to follow up all the cancer foci even in that region, it adds very much to the hopelessness of the case to find also muscles involved and infection likely spread to the pleura and sternal glands. But when recurrence does take place another operation, as a rule, should be done and the morbid part as freely and thoroughly as possible be removed. Even when recurrence for the third or fourth time is seen, the operation, unless there is marked systemic dissemination, again as the only hope for life should be advised. I have one case on which I have operated eight times, and only the last one successful. The disease has not made its re-appearance after six years. But, to to my mind, recurrence after an operation in the early stage goes far to show want of thoroughness in the first operation.

The sooner the cancer is removed after its presence is known, the less the chance of a recurrence and the better the chance of a radical cure. If the operation can be performed before six months have expired—before the disease has had a chance to spread by contiguity, by lymphatics or by the blood—the better and more certain the results. It is true the lymphatics are in some cases involved before six months have passed, but, as a rule, such is not the case. Delay is often recommended by the practitioner, as for a time he is unable to clearly determine the nature of the neoplasm. All the cardinal symptoms of cancer are not present, and in so grave a case he prefers to wait, and, as a rule, in my experience, he waits until other parts besides the breast are involved. Any tumor in the breast of a woman occurring before the menopause should be removed. *If it grows rapidly it is malignant.* If there is doubt about its nature the surgeon should cut down, remove a piece and find out what it is, and at the same time be prepared to operate on the case—to operate then, not the next day. Don't wait till the operation is hopeless, or nearly so. The frequency and time of recurrence will greatly depend on the time the operation is performed.

Much depends also, as has been stated, on the character of the operation. It is better not to operate at all than to do it imperfectly. More than half of the recurrences are situated in the breast, near or in the old scar, because the operator left in the skin, or fascia, or fat, or gland some of the cancer tissue, and when the disease has again made its appearance, it is not fairly a recurrence, but the growing of unremoved fragments of cancer at the original operation, and when the re-appearance is in the axillary glands it is fair to infer that they were invaded before the operation was performed, and have grown and developed since. These axillary glands should have all been removed at the first operation. To take out a malignant tumor of the breast and leave the rest of the mammary tissue, in the present state of our knowledge, is both cruel and silly. To leave the axillary glands is almost as bad. Cancer of the breast is a single tumor.

When recurrence takes place in the neighborhood of the operation the recurrences are multiple, showing that more than one small piece or fragment of cancer was left. It has been recently recommended that the surgeon should avoid, if possible, cutting into cancerous neoplasm or tissue, but to keep the knife outside of the diseased part, to avoid detaching some small pieces which may grow like grafts, if overlooked and not removed.

But while the foregoing may explain the large majority of the cases of the re-appearance of cancer, there are still cases that appear so late after the primary operation—ten, fifteen, or even twenty years—that cannot be accounted for in this way. It is true

that some cancers of the breast are stationary for months and years, and occasionally undergo atrophy, wither, and almost dry up. So a recurrent growth, which pathologically and morphologically is identical with the primary neoplasm, may pursue the same course, and a very late re-appearance may be the very tardy growth of an unextirpated fragment.

But there are doubtless recurrences independent of unextirpated cancer cells left as foci for the regrowth of the disease; recurrences which can only be explained as independent re-appearances of cancer. Probably the same causes that produced the original disease are still in operation and have reproduced it. Fortunately these cases are rare. This form of recurrence may take place in a piece of the mammary gland that has extended into the axilla, and was completely isolated from the normal gland. Williams found in 132 consecutive cases of cancer of the breast, that thirteen had originated in supernumerary mammary structure, entirely disconnected with the normal gland.

Recurrence is more likely to take place in young women than in the old, and in very rapidly developing growth, rather than in one stationary or slow to increase, and in the soft variety of cancer than the hard.

Origin of Cancer.—For a long time two theories have been advanced as to the essential nature of cancer; both of them are advocated to-day. The first is the embryonic, or evolutional theory, and the second is, that the disease is due to a micro-organism. The first, while based on some sound and interesting observations, is not sufficient to explain many of the varied manifestations of the cancer. The embryonic theory of the origin of cancer, has, however, many able supporters.

For many years a number of pathologists have regarded these lesions as microbic in character, and as early as 1872, Nepveau found micro-organisms in malignant growths, which he regarded as specific. Since then a number of investigators at different periods have claimed to have discovered the real parasite of cancer; but their conclusions have been challenged by other observers and the theories advanced were rejected. At one time a micro-organism, called "cancer bodies," or psoro-sperms, which belong to one of the many forms of *protozoa*, were asserted to be the cause of cancer. The special form supposed to be so intimately connected with the etiology of this disease was known as "coccidium," and were discovered chiefly in the new formed epithelial cells in the periphery of the cancer mass. But the parasite must be shown, isolated, and made to produce by inoculation the same disease it was alleged to have caused before it can be acknowledged parasitic in nature. All attempts at this were said to be failures.

Early in 1895, two Italian pathologists published, nearly at the same time, very remarkable experimental results of their investigations, which have attracted much interest. They found the active agent in the formation of cancer to be the *blastomycetæ*, which belong to a class of fungi to which the common yeast plants belong. Dr. Roswell Park has given a good epitome of this work of the Italians, and concludes by saying: "Thus, without quoting in detail the experimental labors of Sanfelice Roncali, and their pupils, it may be stated as positively proven that the blastomycetæ above alluded to, *a. e.*, at least, some of them, are capable: *first*, of being isolated by culture-methods from certain carcinomata and sarcomata; *second*, of indentification as belonging among the yeasts; *third*, of producing tumors in animals by injection, under suitable precautions, the resulting tumors being strikingly analogous to, or identical with, those from which the cultures were made; and, *fourth*, of furnishing from these tumors further cultures, from which yet other experimental inoculations can be made.

Without going so far as to say that this can be done in every instance, or that all cancers are necessarily of parasitic origin, one is justified by these results in at least maintaining that some cancers are positively of such origin. If, upon this experimental ground, one should infer that all cancers are parasitic manifestations, he would do, as will be seen, little violence to the laws of logic." Indeed, the opinion of a majority of those who have most closely studied the subject, is that the cancer is due to a micro-parasite, the nature of which is so far unknown, but that it differs from any species of bacteria, or micrococci so far discovered. We can readily believe from the number and character of the men now investigating this subject, in both clinics and laboratories, that the question will not long be an unsettled one.

Diagnosis. — Diagnosis, in the later stages of cancer of the breast, is always plain, but in the early stages it is often very difficult, and will tax to the utmost the skill of the surgeon. Early cancer may be mistaken for inflammatory conditions, and vice versa. The following symptoms may enable one to make the distinction:

In inflammation, there is pain and tenderness on pressure; in early cancer, there is no pain or tenderness. When in later stages there is pain in cancer, it is sharp

and lancinating; the pain of inflammation is throbbing and pulastile. Dimpling of the skin, while not absolutely pathognomonic, is much more liable to occur in cancer. If it happens to be present in inflammatory swelling, it usually marks the site of an old scar. In inflammatory trouble, the breast is enlarged; in cancer, it is smaller than natural; in both, a certain amount of fixation exists, but this is more maked in inflammation than the early stages of cancer. In inflammation, the swelling is diffuse and spread over a large space; in cancer, the swelling is nodular and better defined. Enlarged veins denote cancer; slight œdema of the skin indicates suppuration. During lactation, true tumors are rare, but inflammation common. Enlargement of axillary glands occurs in both conditions. They are found in three or four weeks in inflammation, and in four or five months after the commencement of cancer. In inflammation the diseased glands are larger, more numerous, and quite tender on manipulation.

It is sometimes difficult to distinguish cancer of the breast from *tuberculosis of that organ* in its early stage. Both may appear as a single nodule about the size of a hen's egg. In both diseases, the upper and outer segment of the breast is the most common site. In both, the disease at first is painless; in neither is the contour of the breast changed. The skin is normal in both; the outline of the tumors is ill-defined, as a rule, in both, and feel as if they were merged into the surrounding gland tissue. Both are characterized by chronicity, and develop insiduously. In both, retraction of the nipple is sometimes found.

After a short time, however, in the tubercular disease, and often before the surgeon sees the case, the mass has broken down by caseous degeneration, or suppuration, and ulcerates through the skin, leaving a fistula-discharging tubercular pus. When this is the case, the distinction is easily made. In tuberculosis, the axillary glands are soon affected; indeed, the primary disease is often in the axillary glands, and the breast tuberculosis is secondary. The glands in the axilla soon suppurate and discharge. In tuberculosis of the breast, the whole organ appears larger than the opposite gland; in cancer, the diseased breast is smaller than its fellow. Breast tuberculosis is rarely, if indeed is ever, primary. A careful examination will reveal tubercle somewhere else in the body. Tuberculosis occurs in young adult women; cancer in women over forty years of age.

In cancer, the axilliary glands do not suppurate, nor do fistulæ form. In all cases, where possible, the aid of the microscope should be employed to determine the nature of the formation.

Syphilis of the breast may be mistaken for cancer, but other evidences besides gummata of the breast would be present and decide the nature of the disease.

A small hard neoplasm, not well defined, with puckered or dimpled skin, retraction of nipple, or bloody discharge from nipple, with the whole breast and tumor looking smaller than the other and sound organ, mean cancer.

Cancer may be confounded with *cyst or cold abscess*. A cyst and cold abscess usually are well defined and fluctuate. Neither have enlarged glands or puckered skin. Any one familiar with the cardinal symptoms of breast carcinoma will be able to distinguish it from sarcoma, adenoma, or villous papilloma. If, however, the case is doubtful, an exploratory incision may be made, and the true nature of the swelling determined. The nature of the doubt should be explained to the patient, and her consent obtained to perform a complete operation if the growth be found malignant. An anæsthetic should be given, and every preparation made to do a radical operation if found necessary. The exploratory incision should be large, as it is impossible to get much satisfaction out of a small incision or an exploratory punch.

Treatment.—The opinion of those best qualified to judge, that cancer, in the beginning, is a local and not a constitutional disease, makes early operative treatment of the first importance. A radical operation, well performed, before regional infection has taken place, gives a most favorable result. Operations undertaken after regional infection exists, or operations not well or thoroughly done, are almost always followed by rapid recurrence. It was the late or imperfectly performed operations, or both of these causes, that made the older surgeon's statistics so bad; that caused them to despair of a possible cure; and that induced one of the most distinguished among them to declare he operated only for the moral effect. It is acknowledged that complete hysterectomy for cancer of the cervix, before lymphatic involvement, very often permanently cures the patient. This is more because the operation is radical than because of the locality of the cancer; but hysterectomy is regarded as a somewhat difficult operation, and only the more skillful surgeons attempt it, while nearly every surgeon or medical practitioner in the city or country believes himself competent to remove a cancerous breast. The truth is, to remove the whole of the disease in cancer of the breast requires a bolder and better

surgeon, a more profound knowledge of anatomy, than to remove the uterus along with the tubes and ovaries.

English and American surgeons were the first to call attention to the inadequate operations which, until recently, were being performed for breast cancer, and to the writings of Charles Moore, and Banks, of Great Britain, and to the younger Gross of Philadelphia, the surgical world is profoundly indebted. In Denmark, Germany, and Austria, the teachings of Moore were accepted, and with improved results.

Unfortunately, a large number of the cases of cancer that the surgeon sees come to him when the disease has made progress; when local and regional infection, or general dissemination, make the removal of the whole disease impossible. When such is the case, it will be better to resort to palliative measures. The patient, when the case was incipient, possibly avoided, for the time, even an examination, much less entertained the idea of an operation, and her medical man,out of sympathy or ignorance, or both, encouraged her to let it alone or paint it with tincture of iodine. Now with speedy and certain death before her, she is willing to accept any risk for the chance of a cure or prolongation of life. To operate in hopeless cases only adds to the list of unsuccessful statistics and brings surgery into disrepute. In cancer of the breast,the rule should be to remove all, or none, of the disease. The smallest fragment, microscopic in size, if left unremoved, possesses the power of proliferation,and will certainly reproduce the growth.

Great age, if accompanied with great debility, may also be a barrier to operation, but old age, without serious senile degeneration, does not preclude operative intervention. Some of the best results that I ever had have been in old people. If the woman is old, the cancer growing slowly, the operation extensive and hazardous, the surgeon may properly decide to let it alone. The extent of regional and local infection must also be considered. Can the whole disease be removed and the large wound healed? The decision is often difficult. Cachexia alone should not be a barrier to the operation. I have repeatedly seen cachexia disappear, when its causes—the cancerous tumor—was taken away. If there is a metastatic tumor, an operation is useless; or, if the patient is at the same time suffering with fatal tuberculosis biabetes, nephritis, or cerebral disease, conservative treatment is alone justifiable.

Cancer en cuirasse is usually so diffused as to make its removal impossible, and, as a rule, such cases should be considered inoperable. Atrophic cancer should be removed with the knife where it is practicable to remove the whole of the infected area, for while usually slow in progress, it is liable at any time to become rapid and spreading. When the case is inoperable, palliative treatment is our only resource. Every means, as far as possible, should be employed to preserve the patient's general health. Directions should be given as to climate, diet, exercise, clothing,etc. Tonics will likely be needed, and iron, hypophosphites, wine, and malt liquors, may be used. When suffering is great, some preparation of opium should be prescribed. No other drug, in such cases, is of value for this purpose. The dose should be large enough to relieve the pain, no matter how great the quantity or frequent the interval required.

If ulceration has occurred, the sore should be covered with gauze, wet with some antiseptic and deodorizing wash, and covered with thick layers of absorbent cotton, retained by plaster of bandages.

Early and thorough removal is demanded in recurrent cancer,as in the original growth. It is interesting and important to know that it has been found that when cancer recurs it is often in some portion of the skin that was left, and was infected at the time of the first operation; or some small pieces of the breast gland unremoved; or in the pectoral fascia;or in the axillary lymphatics.

I only mention the attempt to destroy cancer of the breast by *caustics* to condemn the practice. These agents, while valuable in small epitheliomata, are absolutely inadequate in our present knowledge of the disease under consideration. The courage of profound ignorance alone would induce one to attempt to clean out the axilla with caustics in breast cancer. They possess no advantage over the knife, while they have the disadvantage of being slow, uncertain in the extent of their action—leaving foul burns difficult to heal—and, unavoidably, are attended with horrible pain, no matter how much opium, cocaine or other similar drugs are combined with them.

The mortality following the complete operation, when antiseptically done, is small—probably no greater than that which has attended removal of the breast alone. Prolongation of life is certainly often effected, and permanent cures not infrequently the result. Volkman's statements of ultimate results is generally accepted. He says: "I unhesitatingly make this statement for all cancers, that when a whole year has passed and the most careful examination can detect neither a local recurrence nor swollen glands, nor any symp-

tom of internal disease, we may begin to hope that a permanent cure may be effected; but after two years usually, and after three years almost without exception, we may feel sure of the result."

For the technique of the operation, the reader is referred to the more recent works in operative surgery. Halstead's method is by far the most complete and perfect.

Sarcoma of the Breast.—Sarcoma of the breast, in all its different varieties, is not a common affection when compared with carcinoma. Indeed, the breast is relatively less liable to sarcoma than the body generally—9.4 per cent. of the neoplasms of the whole body being sarcomatous in nature, while in the female breast, 3.9 per cent. only are of this character. (Williams) While the disease may occur at any period of life, it generally is found in women under thirty years of age, and may be "spindle cell," "round cell," or "giant cell" in form. The first named is the most common, and constitutes about two-thirds of all the cases of sarcoma of the breast. The giant cell is the least frequent. It is not, however, uncommon to find two, or all three varieties in the same tumor. The growth begins in the connective tissue around the acini, and when we remember how much connective tissue the mammary gland contains, we are surprised that sarcoma of that organ is comparatively so rare. As the tumor develops, the acini are destroyed and the ducts distended. The gland tissue undergoes atrophy, and is more or less destroyed. The tumor is sometimes encapsulated, but the capsule is spurious, and belongs to and is a part of the malignant neoplasm.

Round cell sarcoma is soft, extremely vascular, grows with great rapidity, and is the most malignant of all the varieties. The patient may live for a year or longer, but life is often destroyed in three or four months. The form is sometimes known as *medullary sarcoma*. In the spindle celled variety, local and general dissemination is not so rapid. The tumor is firm to the feel, round, smooth or slightly lobulated. During the evolution of sarcoma, rupture of one of the new formed vessels may take place and blood be extravasated in the intercellular spaces; in this way, blood cysts are common.

Rapid growth is one of the characteristics of all sarcomata, but occasionally a tumor of this nature may form in the breast and remain stationary for years, and then suddenly develop its malignancy and grow rapidly, invading the neighboring structures; or a fibroma or adenoma, which has existed in the breast and been stationary for years, may degenerate into a sarcomatous growth.

Symptoms of Sarcoma.—When first noticed the tumor may be the size of a walnut, or pullet's egg, soft and cystic, or more firm to the touch, smooth or slightly nodular. The integument over the growth is not involved, but free and movable. When the tumors becomes large, the cutaneous veins are dilated, and only very late in the disease does the skin give way and a fungous mass protrude through it. There is no cicatricial contraction, or dimpling of the skin, as in cancer. There is no pain generally. The sarcomatous tumor is softer, grows more rapidly, and is much larger than carcinoma. There is sometimes a blood discharge from the nipple, but no retraction, as is often the case in cancer. The glands in the axilla are only occasionally involved, not so hard or immobile as in cancer. The tendency to infiltrate the parts around it, and the disease to become generalized and characteristic. Its rapid growth, for in a year it may become as large as a goose egg, will distinguish it from adenoma, obroma, or any form of benign tumor, In its last stages, bleeding from ulceration and sloughing is common, and pain may then be great when the chest wall and integument become involved. When this is the case the general health becomes involved, and symptoms of general cachexia present themselves. Metastatic tumors appear more often in the lungs, liver, and brain, but may form anywhere in the body. Sarcoma is disseminated generally by the blood vessels, but occasionally also by the lymphatics, in the glands of which secondary deposits are sometimes found.

Diagnosis of Sarcoma.—The *diagnosis* of sarcoma, from other malignant or benign tumors, may be made out from the above, but it is not uncommon to mistake sarcoma for an abscess, or the reverse. A soft, smooth, cystic sarcoma may readily be mistaken for an abscess, and an exploratory puncture be necessary to decide the question.

Treatment of Sarcoma.—The *treatment* is early and complete removal. The operation should be as thorough and radical as for carcinoma. The axilla should be opened; the glands, fat, and loose tissue removed. There should be no hesitation in removing skin suspected to be infected, no matter how extensive. Every portion of the mammary gland is of course to be removed, even if sound in its appearance, and the connective tissue around the gland completely dissected away. This gives the only chance of a permanent cure, and the chances of cure are better than in carcinoma, If recurrence takes place the disease should

again be removed, more completely, if possible, than at the first operation. It is very well for the operator to feel when sarcoma or carcinoma return after early removal that the first operation was widely and radically done.

It is only fair to say that W. B. Coley, of New York, and others, have stated that they have seen carcinomatous tumors disappear under the influence of repeated injections of a solution of the toxines of bacillus prodigiosus, and Fehleisen's coccus of erysipelas. Some surgeons have reported cures of sarcoma by the use of the toxic product of the latter alone. The question is still unsettled, but there is no reason why such injections should not be tried in cases inoperable from delay, or from the location of the growth.

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DISCUSSION.

Dr. H. B. Weaver.—I do not rise to discuss the paper, but merely to report a case in a few words in order more essentially to elicit the opinion of Dr. McGuire in respect to the truth which is germane to this question. It is a case of sarcoma. The lady consulted me about four months ago, in reference to what she called a rising or blood boil in the surface of the upper third of thigh, about four or five inches by three inches in diameter, just at the head of the adductor and sartorius. For a week or so I was puzzled in the diagnosis, and thought in the beginning it was probably an abscess. For a week or two more the skin was very red and congested, and for a week or so it showed evidence of pitting (?) on pressure, and I thought probably I had now an abscess. I took my little exploratory history and made an incision into it about an inch and a half toward the middle, and found no pus. I then began to think very seriously of its being a malignant tumor, and told the family of the fact. The lady is about thirty-three years of age and otherwise a good healthy woman. I called in one of our surgeons, Dr. Meriweather, in consultation. He confirmed the diagnosis, but to be certain about it, at the time it began to slough and ulcerate, we sent a good specimen to an eminent pathologist, who returned the diagnosis as undoubtedly being sarcoma. Then as they refused even a hip joint operation, we began the treatment with Coley's injunction of mixed antitoxin of streplococcus and erysipelas. We began with one drop of the mixture. The first dose was followed by the most terrible reaction I ever saw for a patient to live, the fever ran up to 104 or 105, vomiting began, and nausea was intense, and sweat, and everything else of that character. I guess I applied whiskey and nitrate of strychnine and everything else, in a hurry, but she reacted and came all right, and on the third day we repeated the dose, not quite so heavy, and the reaction was less, and the chill was less. In about four days the tumor showed evidence of retraction, the whole of the inflamed part, which was about six to ten inches, extending clear down to the bone, began to show evidence of lessening, the tumor became smaller, and up to last week the tumor had sloughed to about one-third its size, the induration and the skin clear around to the bone had grown perfectly soft, it had not crossed the line of Pouparts' ligiment, the glands so far had not become indurated, and it showed every evidence of the tumor yielding to that treatment. Now, that is the condition of the patient at this time. The tumor is probably about one-third the size it was when we began the injection. As that is the case, I would like to hear the Doctor's opinion.

Dr. Paul B. Barringer.—As Dr. McGuire well said, there is no subject that interests the general practitioner more than the subject of mammary cancer. Dr. Halstead, whom he cites, owes his success to the fact that he was the first to recognize the true anatomical relations of this gland. This is one of the places in the body in which comparative anatomy throws much light on the anatomy of the human subject.

Recognizing that reproduction is the goal of individual existence, we must recognize the secondary law that all parts of the reproductive system are provided, as far as nature can, against possible disaster. To this end, the mammary gland is supplied with an unusually large number of vessels, and vessels which in their complexity of origin have no analogue in the body—thoracic, intercostals, internal mammaries, and, by anastomosis below, the epigastrics. There is an unbroken column of blood from the internal mammary at the base of the neck through the epigastrics to the groin.

To appreciate why this is, we must remember that our female has the mammæ on the anterior part of the torso. On the cow the mammæ are located on the posterior, or inferior portions, of the torso, whereas, as we know, the hog has mammary glands of anterior, posterior and median type. It has been my fortune or misfortune to see a human female presenting nearly the type shown in the latter animal, two normal mammæ, two immature below, and two still more immature below these, and you can readily see from the comparative anatomy why they should thus exist.

I will call your attention particularly to

the anatomy of the lymphatics. While the greater part of these follow the inferior border of the pectoralis major, not a few pierce the chest, and following the route of the internal mammary artery, join the thoracic duct in the thorax. These go in about the third, fourth, or fifth intercostal space. In mammary cancer it makes no difference how elaborately you proceed to remove the gland and the axillary contents if the infection has reached the line of those thoracic lymphatics, the operation will be a failure. You may "skin them alive," as has been charged, by taking off the entire front of the chest, it will do no good unless you go down as far as you can on these thoracic lymphatics. Dr. Halstead was the first to go down deep on the intercostals, and hence his remarkable results.

I have reason to believe that lymphatics follow this anterior vascular trunk throughout its entire length. If so, obstructions to axillary and thoracic lymphatics might force back the lymph contents, in spite of the valves, and give rise to the so-called metastatic deposits seen on the lower face of the belly. In short, it remains for some surgical Moses to devise a plan for going down on these vessels and removing them before we will have a deliverance from this awful malady.

Dr. W. L. Robinson.—I just want to thank Dr. McGuire for his valuable paper. It was very instructive to me and certainly I have been very much interested in it. One thing that impresses me very particularly, and that was this, I meet with it in my experience and I am thoroughly satisfied in the last few years the great majority of the cases that have been treated, have resulted in prolongation of life and in a permanent cure of some of the number. Had I operated as I did some years ago I think they would have been in their graves now.

Dr. McGuire.—I recognize the kindness you have shown me in letting me go over my time, or I would like to have read all I have to say, but I read the most important part of it. There is one thing that interests me, that the more the subject is investigated the more and more certainly will we come to the conclusion that cancer is a local trouble, and not only local but it is parasitic, and if we can get it away in time and do the work thoroughly the patient will get well. I think that conclusion is pretty well established. I know that a large proportion of the best surgeons in the world believe that if this tumor is properly removed the individual remains well. I know that it is very usually believed that to remove a cancerous breast is a very simple operation, but I think that those who have tried it, and many of you have tried it, will agree with me in saying that when the operation is done completely and thoroughly, that it requires a profound knowledge of anatomy, it requires a most skillful surgery to properly take out cancer of the breast. I thank you for your courtesy.

Drainage in Abdominal Surgery.†

By J. W. Long, M. D., Salisbury, N. C.

The question of drainage in abdominal operations dates back to the time when man first dared to invade the peritoneal cavity possibly before, and will always be of vital interest to the surgeon as long as abdominal sections are done.

The trend of modern surgery is towards simplicity—thorough, complete work stripped of all superfluities. We have arrived at that stage in abdominal work where we can afford to have an opinion as to what is best to be done and to practise well defined procedures in dealing with the difficult problems that confront us. As every operator is in one sense a law unto himself, he should determine what methods will yield the best results in his hands. This can be done only by extensive reading and sifting the literature of the subject, personal observations of the work of other men, and one's own experience. Some operators drain every case, others of equal note drain only a small per cent. Why is this? Is drainage necessary, or is it a habit? If it is necessary, why does the surgeon who does not drain get good results? If it is unnecessary, why does the surgeon who drains every case practise a method which is useless?

I speak to men renowned in abdominal surgery: I ask you the question, "Why do you drain?"

In thinking over this matter I can conceive of but two reasons for draining: either,

(1) There is something in the abdomen that needs to be drained away, or

(2) During the operation *we put something* there that should be allowed to escape.

In other words, we are dealing with an infectious case, or we infect the case by our manipulations.

The first class is strongly represented by a case of general septic suppurating peritonitis. Here the primal object is to drain, and thereby remove the infectious material that is rapidly killing our patient. Therefore we make long incisions, break up all pus pockets, wash freely with gallons of

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salt solution, and drain from every available point.

The other class may be illustrated by a case of simple removal of the tubes and ovaries. Here, there is no infectious matter, but the operator is not quite sure of his technique and he inserts a glass tube or a piece of gauze. Had his aseptic precautions been perfect, there would have been no need of drainage. Between these two extremes there are many gradations. I state candidly that the question of drainage in abdominal cases has always given me much concern.

Think for a moment! Take a healthy stalwart man, open his abdomen and insert a glass tube or a roll of gauze down between the intestines to the bottom of the pelvis! How tolerant the peritoneum must be to withstand such intrusion!

True, the conditions sometimes present justify resorting to these harsh measures, but how often have we used them when in the light of later experience they might have been omitted.

The peritoneum is really a great lymphatic gland. It literally drinks up any fluid that is poured into it. The modern surgeon does not hesitate to fill the cavity with salt solution and close without drainage, knowing that in short while it will all be absorbed into the circulation and really benefit the patient. Serum and blood, in fact any innocuous fluid may be disposed of the same way. Even septic fluids are absorbed with great rapidity which accounts for the oftimes *early* overwhelming of the general system in septic peritonitis.

Again, it is readily admitted that all forms of drainage carry with them certain dangers and inconveniences. Drains of any kind leave the abdominal door open, as it were, and thereby lay the patient liable to subsequent infection after even the cleanest operation. Glass drains are liable to break. Gauze drains are hard to remove. Nature endeavors to protect the peritoneum from the presence of the drains by rapidly throwing out adhesions; and these in turn become a hindrance to normal function and even a menace to life by their restrictive and obstructive effects. Later, the site of the drain may be the starting point of hernia.

But to do away with drainage, we must do clean surgery. Indeed, the ulterior object of this paper is to enter another plea for clean surgery. There must be no make belief, nothing slip-shod. There must be no parade of antiseptic methods with glaring inconsistences in the minor details. To omit the drain and do sloven work, is to sometimes lose your patient. The more perfect a surgeon's technique the less he drains. Some men may retain the drain from force of habit, but a survey of the work of a considerable number of surgeons will convince us that surgeons are draining their abdominal cases very much less frequently than formerly. I feel sure there are those present who will sustain this statement from their own experience. Kelly says that formerly he drained in eighty-five per cent. of his cases, now in only ten or fifteen percent. From the very beginning of my abdominal work I was always glad when I could close the abdomen without drainage, and I find that the more I operate the less I drain. So decided have my convictions become upon this subject that in certain cases which formerly I would have drained now I do not think of draining.

The limitations of this occasion would hardly permit me to go into details sufficiently to point out the indications for or against drainage in each and every class of cases that came under our care, but it may be broadly stated that *septic cases should be drained while clean cases should not be drained.*

In fact the tendency is to go still further and omit drainage in many cases accompanied by more or less infection. I will cite a case to show what may sometimes be done with a septic case.

Mrs. O., referred by Drs. Turner and Doughton, of Wilkesboro, age 52, married, mother of several children, has noticed an abdominal enlargement for nearly a year,. During that time the periods have been irregular and sometimes profuse; she also has a left inguinal hernia. Since the middle of June she has been confined to her bed, and takes morphine daily for the pains. I saw this patient at her home on August 18th. The abdomen was enormously distended, exquisitely tender, symmetrical in outline. Fluctuation could be made out, and by deep pressure a mass could be felt. The sensation was that of a tumor surrounded by fluid. I declined to operate at the patient's home, and advised that she be brought to the hospital, which was done September 13th. She was unable to sit up and was brought on a stretcher the distance of 150 miles.

An examination, after she reached the Sanatorium, revealed her condition to be much worse than when seen in August. The abdomen was more distended, large veins coursed over it; the tenderness especially in the left side was extreme, emaciation was marked, the kidneys were secreting only three ounces of urine in twenty-four hours, the pulse weak and frequent, and the temperature ranged from 99 deg. to 102 deg., while her vision was so im-

paired she could not distinguish a white person from a black one. I kept her for a month before I dared to operate on her. Active stimulation, during this time, improved her considerably. On October 14th Drs. John Whitehead, McKenzie, Turner and I opened the abdomen and found the largest multilocular cyst of the uterus I have ever seen. Together with the moderate amount of free peritoneal fluid present it weighed not less than fifty pounds. It filled the pelvis, the entire abdomen, displacing the viscera until actually it extended up into the thorax quite to the nipple line. It was adherent to every thing in sight except, strange to say, the ovaries, which were free and normal. The enucleation was difficult and tedious, as the tumor had to be stripped by piecemeal from diaphram, abdominal wall and viscera. The cyst contents were varied and complex. Our head nurse, a woman of experience, trained at the Hopkins, said she never saw such stuff taken out of any person. The evidences of peritonitis and inflammation of contiguous tissues were abundant. Of course, the uterus was removed also.

After copious flushing and washing (I use this word advisedly) with hot sterile salt solution the abdomen was closed without drainage. This woman made one of the nicest recoveries I ever saw, her functions all became normal, she gained strength rapidly, and while she did not literally "pick up her bed" she did walk and went home happy.

What could drainage have added to this case? Only discomfort, annoyance, and another source of danger. I could multiply illustrations till I wearied you, therefore, I will let this one case suffice, as it tends to establish the truth of what I set out to prove, namely: that, if we do clean surgery there is rarely need for drainage.

The Diagnosis and Treatment of Tubercular Peritonitis.†

By W. L. Robinson, M. D., Danville, Va

The subject of tubercular peritonitis is one full of interest, both to the general practitioner and surgeon. The disease for years was regarded incurable, till surgery opened up a field promising much, which has been realized in certain forms, and more recently, while no special curative agencies in the therapeutical line offer anything of significance, yet statistics show from fifteen to thirty per cent. of spontaneous cures, especially in the young. Reyburn and Hughes Bennett state that from examination of cadavers, from one-third to one-half of all individuals who die after the age of forty have had spontaneous arrest of tubercle in some stage.

While all forms of tubercular peritonitis are full of interest, I desire more especially to allude to some points pertaining to the more acute form.

Whatever divisions be made, whether of fibrous, ascitic, sero-membranous, purulent or ulcerative, there are two leading features in tubercular peritonitis—one is plastic exudate, the other effusion.

The first is always present, the latter absent in many cases.

The varied symptomatology of invasion and progress forces diagnosis by careful exclusion.

1st. In one you will find it marked by insiduous, slow and even advance without or with only occasional pyrexia, and with ascitis as an early and leading trait.

2d. Again we may have a series of attacks with intervening lulls until the entire peritoneal cavity has been attacked without effusion, but retraction of the abdomen.

3d. Again chills with fever or seemingly invasion of typhoid fever marks its progress.

4th. The sudden invasion after miscarriage.

5th. Gradual increase of swelling, resulting in enlarged abdomen with more or less pain (abdominal) and pain in urinating.

6th. Again, effusion may begin without abdominal tenderness, without a febrile condition, and with nutrition unaffected. Such a condition unexplained in some other way, should arouse suspicion of tuberculosis.

When you can trace the invasion from pelvis above with floating masses in abdomen and deep intestinal percussion sound, the diagnosis is usually clear.

I have noticed, in manipulating the abdomen with hand extended, that under the finger bulbs, on deep pressure, a crepitant feel, like the sensation of air or water infiltration in cellular tissue. Again, I have observed under such pressure the gurgling of displaced gas, as you find in adhesive appendicitis.

The history of the case with the impression the individual case makes on you (like deciding when to operate for appendicitis) enables you to sum up a diagnosis; yet you cannot formulate in words or rules the guide thereto.

I can add something possibly to these diagnostic hints, by briefly reviewing the

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history of several cases. First, I will report three cases in young children.

One was rosy and stout,of tubercular ancestry, the other two averagely robust, who came under my care in the last twelve months.

Case 1. Mr. D.'s child, aged 6 years, had several chills, followed by fever, and then a regular evening rise of temperature to 103 deg. for ten days, and then an intermission of a week, with fever recurring thereafter irregular in its history, then exacerbation often the highest in the morning, but abating several times in twenty-four hours, constipation persisting in spite of several mercurial purgatives. There were abdominal pains,with irritable bladder; the appetite was a marked feature, never failing under fever or quinine, the latter faithfully tested for the first ten days; sponging, hot douches over abdomen, painting with iodine and collodion over bowels, sun baths, massage, etc., and a stay of two months in the country gradually dissipated every symptom, and now six months has elapsed with perfect health.

Case 2. Miss M., aged 9 years, tubercular ancestry, commencing indigestion, pains in abdomen, constipation, slight fever, increasing in the evening, becoming irregular, crepitant feel and gurgling of gas under pressure, pulse rapid, hectic flush occurring several times daily on first one cheek and then on the other, later complicated with pleuritis; treatment, saline irrigation, iodine over abdomen, and massage, fresh air and special care of digestion and building up with apparent restoration of health; there was fluid felt in flanks when examined with attention to position; sick two and one-half months. Now fully recovered.

Case 3. Mr. W. W.'s child, aged 6 years, rosy and active, invasion, gradual pain in bowels, a few days of slight fever, malaise, but appetite good. This condition of slight attack and lull alternated till recently an invasion simulating typhoid fever came on, with tenderness persistent over abdomen; temperature normal in the morning and 101 or 102 in the evening. Mercurial purgatives and quinine availed nothing and was promptly discontinued; later the abdominal tenderness became localized in small areas. The crepitant sensation was marked in this case. Later the tenderness disappeared, but promptly recurred on walking around; the appetite was excellent and urgent all the while. She is still under observation. Some light will be thrown on this case by the history of the next one, who was her sister.

Case 4. Miss M. W., aged 17 years, tuberculous history; pelvic tenderness for three years, frequently suffering violently, especially at menstrual period; she was always excessive in flow, and too frequent; out-door exercise and even the bicycle seemed to improve her every symptom and general health. I advised operation two years ago, recognizing the tubercular involvement of the appendages. The last attack simulated typhoid fever, ran a history of great violence, nausea, abdominal tenderness, prostration, insomnia, irregular fever, ranging from subnormal to 106 deg. I tided her over the first two weeks, and she was on her feet with fine appetite. The recurrence was attended with constant fever of 104 to 106 deg., and after five days of inability to nourish and fluid forming, I did a laparotomy; temperature subsided promptly, but died from exhaustion; the appendages, pelvic and surrounding tissues, were studded with tubercles. I omitted to state that the 6 year old sister menstruated two months before last attack.

Case 5. Dr. Spencer'scase: Young lady, 15 years of age; had been suffering with general tenderness and apparent appendicitis, with pain and fever, for months. Operation for appendicitis. The whole of the peritoneum and intestines were matted together, and nodulated and studded with tubercles as thick as possible. The whole intestines were agglutinated in one mass and scarlet red. The adhesions were liberally broken up, appendix removed, flushed and wiped dry, dusted with iodoform, and well walled off with gauze. Recovery rapid.

Case 6. Mrs. Hundly, aged 32. Referred to me by Dr. Smith, of Henry. Temperature for eight weeks had ranged from 97 in the morning to 104½ in the evening. Abdomen distended and ascitis; diagnosis easy. Operation revealed floating gelatinous masses filling the abdomen and peritoneum, and all inner surfaces studded with tubercles. Irrigated, dried with gauze, dusted freely with iodoform and walled ex tensively with gauze. Temperature did not reach 100 after operation, and gained twenty pounds in five weeks. Lived six years, bore a healthy child and died of pneumonia.

Case 7. Miss S. T., aged 18; always regarded as a healthy girl; had been treated for typhoid fever for seven weeks; morning temperature subnormal, afternoon 103½ or more; fine appetite; going around. The above was the history when called in. She was a niece of the last named lady,and I diagnosed tubercular peritonitis; operated and found adhesions too strong to be broken up. Liberated as far as practicable. Temperature remained normal for seven days, and apparent improvement, then recurrence of trouble, ending fatally in eight weeks. She

was a mere skeleton when I saw her. I am inclined to think had operation been performed when adhesions were slight a different result might have been attained.

TREATMENT.

It is stated that from fifteen to thirty per cent. of acute cases spontaneously recover. It is significant that the tendency of the disease to self-limitation is sufficiently marked to cause so careful an observer as Kaulich to define it by a separate group in his classification of the different forms. This tendency is not confined to tubercular peritonitis, but here, rather than elsewhere, the result is more possible of attainment.

The lungs appear to be the region in which the life history of the bacillus attains its perfect fulfillment; here it multiplies with greatest activity, and as a result produces the most disastrous effects upon life and tissue. In the lungs the normal environment favors rather than retards the extension of the invasion. Yet in a paper based upon the result of 1146 post-mortems at Bellevue Hospital, Harry P. Loomis gives a very large percentage of observations showing spontaneous cicatrization of lung lesions after tuberculosis. In the researches of Loomis we have the logical inference before us that the ratio he observed of spontaneous cicatrization in the lungs may be assumed to be true of the peritoneum, plus the enhanced tendency of the latter part to limit the extension of disease, but to accomplish this, either in the lungs or peritoneum, we must have unimpaired a certain vital antagonism to the disease. Osler says: "There is no inherent improbability why tuberculosis of the peritoneum should not undergo involution as they do elsewhere. Anatomically the peritoneal growth bears in its evolution a close analogy to the pulmonary, and this is further borne out by the retrograde changes through which it passes, just as the aggregations of miliary nodules on the lungs may undergo the changes we speak of as healing, becoming hard and fibroid, so in the peritoneum, the tubercle tend in many cases to become sclerotic, and passes into a condition in which it is practically harmless."

Tuberculosis being a disease of exhaustion by pyrexia, spontaneous cure must largely depend on extent of invasion, then the question resolves itself as to how we can so sustain the vital forces that resistant agent may keep in tact the assimulating powers.

We see the largest percentage of recoveries in the young when the nutritive forces are at the summit of activity. Our efforts should be devoted to the improvement of the general health by proper attention to the digestive organs, the regulation of the bowels and proper dietary, avoiding fermentation producers, using irrigation of colon, with saline washes, sponge baths, massage, pouring hot water over abdomen, painting abdomen with iodine, etc. Bedford alum water or mass, on account of the iodine and iron it contains, is indicated. Correction of constipation, sun-light and fresh air, are of paramount importance.

The operative side is attractive because we often get prompt and striking results. Not only in the ascitic form, but in the class of cases with retracted abdomen, when exudative adhesives are not too strong, I see no reason for non-interference. Careful severing of adhesions, wiping out with dry gauze, free dusting with iodoform, and extensive walling off with iodoform gauze is indicated. The effect of iodoform in tubercular joints is certainly suggestive of its possible good influence in tubercular peritonitis.

While we recognize that the results of laparotomy are strongly encouraging, yet the explanation of how it cures is still unsatisfactory, so we go on empirically. Nevertheless, I will impose on your time by reading an article by Hildebrant on the causes of the healing influence of laparotomy in tubercular peritonitis. It is at least interesting and ingenious.

He says: "Tubercular peritonitis is undoubtedly cured by laparotomy, but satisfactory explanation is lacking, and the various theories of this puzzling fact call for serious reflection."

The writer first speaks of the appearances resulting from abdominal incision of the unchanged (healthy) peritoneum. He experimented upon dogs and cats by dividing the various layers of the abdominal walls, then closing the same. After some time he reopens and finds as a result of the laparotomy, besides the paralysis of the intestines, which is observed after every operation upon the abdomen, and which leads to meteorism and constipation, a distinct hyperemia, which may continue for a week after the operation, which he looks upon as venous from its appearance. This hyperemia is in part due to the faulty contraction of the bowel. The constant peristalsis is a powerful means of ridding the intestines of venous blood, and when this is absent there results a congestive hyperemia, just as in paralyzed parts in other portions of the system. The hyperemia is also due to inflammation, which the writer holds occur in every aseptic laparotomy.

As the nature of the inflammation is not definitely established, the physician clings

to the cardinal symptoms, and diagnosticates (inflammation). The tumor, visible at the external portions of the body, corresponds to increased exudation in the peritoneal cavity, which is found after every laparotomy upon re-opening the abdomen. A few days after the operation, there is seen in the free peritoneal cavity a slight quantity of a reddish fluid consisting of cast-off epithelium and a few pus cells. These would be present in greater amount were it not for the enormous absorptive properties of the peritomeum. The local production of warmth and sensitiveness is the result of increased blood supply.

In tubercular peritonitis, there is likewise an active hyperemia set up in consequence of the reaction upon the peritoneum, following opening of the abdomen, and seems to be even more intense than that produced upon the normal unaltered peritoneum. This is probably due to the circumstance that the inflamed tissues hold the blood more firmly in the dilated vessels.

The writer noticed that when laparotomy was done in the early stages of the disease, where no retrogressive changes have yet taken place, no effect upon the condition occurred. This fact is of importance in the explanation in the curative effect of operation. Tubercular peritonitis frequently tends to spontaneous cure, especially in childhood, and laparotomy may assist the natural means which the body possesses to battle against the disease. The failure of a cure in early laparotomy is due to the fact that the operation was undertaken at a stage when the bacilli have not yet reached their complete virulence. Operation done at a later stage when retrogressive changes have taken place in the life of the germs causing the disease, is followed by cure.

How is it to be explained? We know that the congestive hyperemia in the lungs due to severe cardiac disease hinders the development of tuberculosis, causing retrogression of diseased foci, when present, or even complete cure.

Bien induced congestive hyperemia as a treatment in suitable cases of tubercular conditions of the joints and tendons, with favorable results. From this analogy, the author believes that the venous hyperemia which is present for some days after the operation, play an important role in the cure of the disease.

John Duncan, of Edenburg, says: "I don't see how we can escape the conclusion that more than one cause is required to account for the advantages of laparotomy, and that the most important are probably the relief of tension, the removal of irritating fluid, introduction of air and the mechanical interference."

In summing up the treatment, I would be inclined in most cases in the early stages to try the medical and hygienic measures, especially if the symptoms were not urgent as in case 4. But I feel that in the ascitic, sero-membranous, the fibrous (in the early stages) and in those cases caused by extension from the pelvis, surgery is the remedy involving little risk, and giving the strongest hope of cure. Even in the flat abdomen (retracted form) where the matting of intestines and extensive adhesives interfere with the circulation and nutrition of the parts, I think surgical intervention is justifiable.

Puerperal Insanity.

By J. A. Reagan, M.D., Weaverville, N. C.

It is very difficult, with our present state of knowledge, and the different definitions given by authors, to give a definition of insanity that will meet the sanction of the medical profession, as is shown by the best authors who have written on the subject. One author says: "Insanity is a prolonged change in an individual's usual manner of thinking, acting, and feeling, caused by disease or mental derangement." Another says: "Insanity is a term applied to certain results of brain disease and brain defect which invalidates mental integrity."

Puerperal insanity, by some old authors, called puerperal mania, assumes different forms in different individuals. One case, a woman, educated, and reasonably wealthy, was very boisterous, and profane. In her next spell her mind took a religious turn. She raved, was very noisy, sang religious songs, quoted nearly all of several chapters of the New Testament, refused to take either medicine or food for two days and nights. I tried every way, as I thought, to quiet her. Put her in a bath tub in warm water to her neck, applied cold to her head, but it did no good. While I do not encourage deception in any way, it seemed in this case that it might be justified, and as her whole theme was religion, I said to her: "Will you not take some *Holy Water?*" She repeated it two or three times, "Holy water, holy water, yes, I will take that." I put some hydrate of chloral and bromide of potash in water. She drank it, and in a short time was sound asleep. After that she took anything I gave her to eat, and took her medicine in *holy water*, so-called, but would take nothing from any one else. So she became a patient for me in a laborious sense.

Another woman was inclined to eat her child; was easily managed, but seemed to be unconscious most of the time, but would move about just as she was directed.

A third case was a primipara, had no use for her husband or intimate friends. Strangers could manage her better than her friends.

Puerperal insanity most commonly assumes the form of mania or melancholia, although it may come in the form of dementia and moral insanity. It may occur at any time, beginning with conception, on through the puerperal period, or may occur in the period of lactation. It is said to be excited by the profound constitutional changes in the nervous system, occurring at this important period in the life of women. As to its cause, there are a variety of opinions among physicians, which show that its cause is not thoroughly understood.

It is of the utmost importance that insanity of any form should be early recognized, as it is more easily treated, and it should be carefully watched, as one that assumes a form of melancholia may at any time, without any warning, take her own life or the life of some one else; but she is more likely to try to take the life of her child. It often assumes the form of mania; she may kill her nurse or her husband. It becomes very necessary, therefore, that her physician should promptly recognize any departure from the normal manner of acting or talking. He should watch for mental aberration in all forms of exhausting diseases in the puerpera state. There are some rare cases where the maniac concludes she is some one else.

It is reported of a puerperal maniac that she dressed in rather a ludicrous style, and imagined she was an Austrian princess and entitled to the throne.

There was a case came under my care who believed herself to be Queen Victoria, and wished every body to recognize her as such, and got angry when any one disputed her right to the throne of England. She recovered after several months.

It is necessary in those cases to never regard lightly the slightest sign of mental unsoundness. The eccentric acts, or grotesque delusions often excite the merriment of the uninformed bystanders, but they should strike the physician with dread, as a forerunner of more serious disturbances. Let us remember, as Dr. Watts says, "It is the mind that makes the man;" therefore, we should guard the mind, even more zealously, than we would ward off pestilence. My opinion is that there should be a distinction made between pueperal mania and puerperal insanity. Puerperal mania is generally a light disease, and may be momentary at any period of labor, and the woman seems, when she comes right in her mind, to know that she has been saying foolish things, but does not remember what she has been saying. It may last, in some cases, for some days or weeks, but is not of so serious a nature as puerperal insanity, which comes on mostly some days, or even weeks, after confinement, and may last for months, or may terminate in death. Esquirol says: "I found it more frequent, in proportion, among the higher ranks, for out of 144 cases of mental derangement in females of opulent families, the attack came on during childbed, or lactation in 21." Dr. Hoslam states that of 1644 females in Bethlehem Hospital, 84 were cases of this kind; and Dr. Rush mentions five cases out of seventy at the Philadelphia Lunatic Asylum. The premonitory symptoms vary a good deal. In some cases hereditary predispositions, or nervous affections of gestation are causes, but in most of the cases, a degree of exhaustion, conjoined with great or unnatural excitability, headache, and want of sleep, are premonitory symptoms. Dr. Hoslam remarks: "The first symptoms of the approach of this disease after delivery are want of sleep, the countenance becomes flushed, a constrictive pain is often felt in the head, the eyes assume a morbid lustre, and wildly glance at objects in rapid succession; the milk is afterward secreted in less quantity, and when the mind becomes more violently disordered is totally suppressed."

Some writers say there is a greater proportion of puerperal insanity in twin labors, but I have never seen a case in a twin birth.

In the treatment of this disease, simple and rational means should guide the physician. I have found that it was necessary to examine the system thoroughly, and try to regulate any defect in any of the organs, so as to make the physical system as healthy as possible; and as soon as the patient is able to ride out in an open carriage, or buggy, take her from home, and let her mind be directed to strange things and people; for home and home folks are more or less disagreeable to her. It must be remembered from the beginning that the general health is below normal. The nervous system, worn by loss of sleep, which causes the digestive powers to be much weakened, therefore, the most easily digested food should be given—liquids or semi-liquids, or food partially digested with proper medicine. Iron and strychnine are found to be advisable in most cases.

It is hard some times to get the patient to take medicine; hence they do not sleep.

Different patients require different hypnotics. Some bear hydrate of chloral well while it has no effect on others. I believe more patients are more easily affected, and sleep better from 15 to 30 grains of trional, repeated in three or four hours if need be. Children should never be allowed in the room, as it is almost sure to have a bad effect on both. There should be but little if any force used. Good judgment will usually accomplish more than force. I remember one case I was called to see that had been under two good physicians and they said they could do nothing with her. I was told when I arrived that the patient had not slept any for two days and nights. They had given her several hypnotics with no effect. I sat down on the side of the bed, took one of her hands in mine, began to talk pleasantly to her, rubbed her hair back from her forehead, and in one-half hour she was sound asleep, and slept for twenty-four hours. I told them not to wake her. When she awoke next day she was quiet, and her mind clear. She recovered without any more dementia. It is important, in my judgment, to wean the child, if alive, and use means to dry up the milk as speedily as possible. It is important to remove every thing out of the room with which she could injure herself or another, as she might have a desire to kill herself or some one else.

There is an idea prevalent that a case of puerperal insanity brings a reproach on the family, and in a few cases patients have heard insinuations of that character which have caused them to study about the influence it will have on their children and after they are virtually well, have relapsed, and the last stage has been worse than the first. How important it is, therefore, to have proper persons as visitors, and it is the duty of the physician to warn the husband and nurse to watch closely who comes, and warn them not to refer to her trouble, or any thing she said or done while demented. We cannot be too careful in managing this unfortunate class. A mis-step in these cases is not easily amended.

Pneumonia.

By Dr. T. Catlett Gibson, Winton, N. C.

The word pneumonia has been employed to designate inflammation of the lung tissue or pulmonary lobules, occurring in different forms, but is now more commonly restricted to that form termed lobar or croupous pneumonia, and to which I shall refer in this article.

With our present knowledge of the disease we can no longer regard it as a simple inflammation of the lungs accompanied by pyrexia and its concomitant symptoms, but as a specific disease, due to a specific cause, and that cause, a micro-organism—the pneumococci. Yet, it is often if not invariably influenced by exciting causes; such as intemperance, lack of proper food and clothing, previous attacks, and especially exposure to cold and sudden atmospheric changes.

Pneumonia has been almost universally divided into three stages, that of *engorgement, red hepatization and gray hepatization.*

During the first stage the affected lobe is in a state of active congestion which usually lasts from twenty-four to forty-eight hours. In this stage we find, as in other inflammations, redness, heat, swelling, pain, and impaired function. The amount of blood passing through the lung in a given time is greater than normal at first, but as the inflammation and process of solidification increases the blood supply decreases. During this period of increase blood pressure there is considerable pain, which is greatly aggravated by coexisting pleuritis.

Pneumonia generally begins abruptly with a chill, and at the same time there is a rapid rise in temperature, frequently to 104 or 105 F. The pulse rate will vary from 90 to 100 per minute, and the pulse is full and bounding. The respiration is increased to 30 or 40 or more per minute, which at first is in proportion to the amount of pain. There is a short painful cough, at first dry, but soon accompanied with expectoration of a rusty tenacious character. The cheeks are flushed; the expression anxious, and the patient will talk with some difficulty. He generally lies on the affected side and avoids movements of any kind.

As soon as there is an increase pleural exudation and solidification of the lung, he will express himself as "feeling better." The pulse is not so full and strong as during the first stage. The respirations are increased, and out of proportion to the heart's action, which is due to solidification of the lung. If the entire lung is involved there will be dyspnœa, and the symptoms will denote a gravity of disease beyond that usually met with if only a portion of the lung is affected.

With the stage of resolution there is a decided improvement in all the symptoms. The fever diminishes, sometimes gradually, but more frequently there is a sudden fall of temperature to normal or a little below. The cough is less frequent and expectoration easier. The respiration gradually de-

creases. In short, convalescence is declared.

Of the physical signs those first met with are an impairment of movements of respiration. The breathing is weaker but harsher than natural. Vocal fremitus is increased. On percussion, the resonance will be slightly tympanitic, dull, or flat, according to the stage of engorgement or solidification. Of the early physical signs the most important are crepitant ráles, which are almost pathognomonic. They are limited to inspiration. Bronchial breathing and broncophony are signs of consolidation, and as it increases the crepitant ráles are less distinctly heard, and percussion becomes duller with an increased sense of resistance.

There is no known specific treatment, neither can it be aborted; but by a judicious management we may moderate the severity, and thereby lessen the danger and reduce the mortality.

The patient should be put to bed and absolute rest in the recumbent position enforced. All movements of the affected lung should be reduced to a minimum as soon as possible. This is one of the first rules in the treatment of inflammation. The chest wall should be fixed so as to allow the least possible expansion by adhesive straps. This is best done by using adhesive straps, about an inch wide, from spools. Place the patient on the unaffected side, and apply the straps from the spinal column to the median line in front, drawing them tightly over the side of the chest as they are applied. Enough such straps are to be used to cover the entire affected lobe. Pain is almost entirely reljeved immediately on the application of the straps, and the respiration reduced several to the minute. Cough is not so frequent nor severe, and the patient can lie in almost any position with comparative ease.

At the beginning a saline cathartic should be given. The diet should consist principally of milk, meat broths, soft-boiled, poached, or raw eggs, rice, and oatmeal. The temperature of the room should be kept from 66 to 68 F., and any sudden change guarded against.

Drugs have little influence over the disease, but the symptoms can be greatly ameliorated by their use. Tincture of aconite given during the first stage generally has a marked beneficial effect, both in the reduction of temperature and heart action. I do not believe that aconite given during the stage of engorgement, when there is a strong, full pulse and high fever, has a tendency to augment cardiac weakness during the second and third stages which is so much dreaded. But a continued high fever and rapid heart's action has a greater tendency to produce cardiac weakness than aconite when judiciously administered. It should be given in small doses, frequently repeated, until some impression is made on the pulse, and then just enough, and at longer intervals, to keep up the effect. In alcoholic subjects, and those enfeebled by age, with a temperature not over 102.5, it is best not to give it at all.

When the disease passes into the second stage cardiac sedatives should be discontinued, and very few drugs, if any, are required. Nauseating expectorants are never indicated. They interfere with digestion, and in that way do more harm than good. When associated bronchitis calls for an expectorant, the aromatic spirits of ammonia is the best. Given in half drachm doses every 3 or 4 hours, in hot milk, it will promote bronchial secretion, liquify the tenacious mucus, and relieve the distressing cough. Dover's powders and quinine given in doses of 5 grains each, three or four times a day, will relieve the cough, quiet the nervous system, and reduce the temperature.

We should always anticipate cardiac weakness in the habitual drinker and the aged, and guard against it by the early administration of stimulants. Alcohol should be given freely; the amount regulated according to the former habits of the patient. A quick compressible pulse always calls for stimulants. Supportive treatment is indicated as soon as solidification takes place, and a fatal result may be prevented by the timely administration of supportive remedies. If there is a tendency to collapse there is nothing so good as hot milk with brandy. Aromatic spirits of ammonia may be added.

There is a natural tendency to a favorable termination, and if the vital powers of the patient are sustained through the course of the disease, the death rate will be small. We too often make the mistake of treating the disease instead of the patient. The latter is the safest until a specific treatment has been discovered. The crisis should be carefully watched for, and additional stimulants given if indicated. Alcohol should be stopped as soon as danger of asthenia is passed, and tonics, such as quinine, strychnine, and iron given, and solid food allowed.

The Use of Resinol.

By Dr. Horace Wardner, M. D., Supt. Interlaken Sanatorium, La Porte, Indiana.

"Doctor, I burned my arm with steam. I have tried soda and every thing I could think of, but it smarts awfully."

A sample box of resinol was lying on my desk. I gently rubbed the salve over the inflamed surface very thoroughly. This relieved the pain in a very short time. No further complaint came from the patient. The arm was well in a day or two.

This same girl went out shopping when the mercury was fifteen degrees below zero, and as many a girl with a trim little foot and a nicely fitting shoe has done before and will continue to do to the end of time, neglected to put on her over-shoes. This was followed by chilblains of a distressing character for which she used various proposed remedies, but was finally relieved by the use of the ointment from the same sample box.

While sittmg at my desk one day, I heard a voice exclaim. "Come along wid ye now or I'll whack it off wid a cleaver." I looked up to see a ruddy Irish woman half dragging an unwilling, whimpering boy into the office. "Docthur, what can you do wid a bye whats got a ring on his tommy?" "A what!" A ring on his tommy, Mike show the Docthur."

An examination revealed a badly swollen penis with a brass ring imbedded firmly around it. The boy explained that he and Pat O'Houlihan were playing in the back ally with the ring, aud when he tried it on, it would not come off.

A cup of quick silver was on the table. A thought, suggested by reading the report of a similar case, some years before that brass and quick-silver would form an amalgam, led to the immersing of the organ in the mercury, and in a few minutes, to my satisfaction and to the great relief of the boy, the ring crumbled and was readily removed. A dressing of resinol soon relieved the soreness and restored the organ to health.

I have used resinol in various cutaneous applications with great benefit and relief to the patient.

In cases of pruritis either with or without the eczematous eruption, it is one of the best applications obtainable.

It seem to penetrate and nourish the skin.

I have also found it very beneficial in hæmorrhoids. In fact it is useful in any affection of the cutaneous surface, where an aseptic soothing and nourishing dressing is required.

Resinol has been much improved since it was placed before the profession. The gritty character and tendency to grow dark in color has been eliminated in the last sample I used.

I have held a feeling of antagonism to the idea of proprietary pharmaceutical preparations, but some of them are very excellent remedies. Listerine has become a household word.

Nearly every physician has found one or more of them convenient and satisfactory. It is a fad of this "fin de siecle."

It will run its course "The wheat will be separated from the chaff," and the fittest will survive, like Friar's Balsom and the other preparations that have become officinal after going through the stage of secret or partially secret remedies.

One of these will be Resinol.

The Accidents from Vaccination—How to Prevent Them.

By Isadore Dyer, Ph. B.(Yale), M. D., New Orleans, Prof. on Diseases of the Skin, New Orleans Polyclinic, Editor New Orleans Medical and Surgical Journal, Member American Dermatological Association, &c.

The recent revolution in the aspect of vaccination restrictions and regulations in Great Britain has caused a great deal of serious thought regarding the reasons therefor.

The lay public has quietly submitted to any dictum of the medical profession, and its selected representatives on Boards of Health, for many years without remonstrance or even resistance.

In the ignorance of that same medical profession, crude methods of practice have obtained in many fields of practice. In none has this been more patent than in vaccination.

For years the usefulness of this procedure has been accepted, because it has been repeatedly demonstrated. The carelessness in method, the lack of due precaution in the preparation of material used and the promiscuousness of the application of vaccine have suddenly brought down a due and merited result.

Accidents running the whole gamut of complications, from simple infections to deep-seated constitutional afflictions, have been recorded within the last few years.

None of these have been more prominent or more marked than those which affect the skin itself.

From the "sore arm," conditions have been observed affecting limited localities on the body up to serious exudative and septic affections, directly traced to the original vaccination lesion.

In this catagory we might enumerate simple impetigo, furunculosis, erythema multiforme, pemphigus, psoriasis, herpes zoster and herpetiform dermatitis. We have even seen hemorrhagic purpura and

pronounced abscesses follow simple vaccination.

In an article published in the *New Orleans Medical and Surgical Journal* (February, 1896), we classified the eruptions of vaccination as they occurred with and subsequently upon the lesion of inoculation.

The multiplication of these accidents, simple and severe, has created a natural objection on the part of the laity, arguing the infrequency of exposure to small-pox, and unwilling to risk the possible dangers of vaccination which threaten under present methods.

The average practitioner of medicine blindly accepts the fact that vaccination affords certain immunity against small-pox, and believes this bit of philosophy from its historic value. He does not usually question either the source or the quality of the virus used.

To the minds of some practitioners the objections of the laity carry much weight, and they have joined themselves in a crusade against the procedure, instead of really endeavoring to educate themselves upon the fault responsible.

We believe utterly in the complete value of vaccinnation as a preventive of small-pox, and have convinced ourselves that under proper conditions, with the right sort of vaccine lymph, that there should be first of all no accidents, and secondly no reason for the popular objection.

On this account the article we are writing has been projected.

What is necessary to prevent the accidents of vaccination?

In what does vaccination consist?

What steps should be taken to remove popular prejudice?

In the first place the promiscuous distribution of vaccine lymph from the dispensatories of commercial institutions should be stopped.

Vaccine should be made a perfect laboratory product and should be dispensed as antitoxins are from qualified laboratories, in charge of intelligent and conscientious men.

This should be as far as possible under State or national direction. In this way the purity of the lymph could be assured, for, as at present permitted, epidemics of infectious cutaneous diseases are not at all uncommon as a result of impure vaccination lymph.

The method usually adopted by Boards of Health is open to the severest criticism and condemnation. We have seen the representative of a Board of Health publicly vaccinate a whole district of children, with absolutely no pretension to aseptic precautions. The children were lined up with their sleeves rolled up above the elbow and were taken one by one and scratched with a vaccine point, each successive point being dipped in a more or less dirty glass, full of more or less dirty water. The children then were lined up until the site of vaccination had dried; the whole process, from start to finish, being a criminal procedure, as a surgical wound had been created on a septic surface, after which it was still more exposed to the conditions of infection which a small room, crowded with the worst class of people, could occasion.

Is it any wonder that any sort of accident, of infectious nature, should occur?

I have likewise seen a couple of hundred of steerage passengers on a trans-Atlantic steamer subjected to the same sort of treatment, one point or quill often being used for two subjects.

In what does vaccination really consist?

In the inoculation of an individual with a specific virus, which, after due incubation, produces a lesion, peculiar to the disease from which the original virus was obtained.

When is vaccination complete?

As soon as the first lesion of vaccinia shows itself.

What is the first lesion of vaccinia?

The vesicle usually.

Vaccinia does not differ from its congeners, varicella aud variola. These diseases have as their typical eruption a successive papule and vesicle, which in varicella usually does not pustulate. If in either disease the pustule did not form, these diseases would be none the less varicella and variola. If it were possible, as it sometimes is, to prevent the formation of pustules in these diseases, they would be none the less variola and varicella. Not infrequently, in vaccination, after from 5 to 8 days, there is itching, a papule forms, or a vesicle, inflammation subsides, and the process stops.

Has vaccination been complete?

Is it necessary for the subsequent pus infection to occur, bringing in its train the possibility of further septic infection, in order that we may declare vaccination complete?

Is it not rather an indication that the degree of resistance in the individual has prevented a severe intoxication with the original inoculation?

It is our belief, and it has been our practice, both as a teacher, and as a physician, to declare vaccination complete as soon as the vesicle has formed. This belief and practice has successfully prevented, for a period of nearly six year, any accident from vaccination either direct or indirect.

First of all, the area to be inoculated is

thoroughly washed with soap and water, rinsed until no soap remains, then sponged freely with alcohol or ether.

Two separate inoculations are made with two separate points. Then a layer of borated cotton is placed over the wound and either rubber tissue or a plaster holds the cotton in place. On the third, and until the seventh or eighth day, the wound is watched. When the vesicle appears, it is broken, the surface washed with bichloride solution, or a 5 per cent. carbolic acid solution, and an antiseptic dressing applied.

This procedure has been adopted among persons who have been exposed at the time or subsequently to small-pox. I have vaccinated myself in this way five times, and never have had even any areola of inflammatory redness about the lesion when it has formed.

If this or a like method of cleanliness were employed both in private practice and in public offices, we believe that the accidents of vaccination would attract less public notice, because there would be none to be observed.

"Drug Habits."*

By Carl V. Reynolds, M. D.

Selecting for our consideration this evening a subject, "Drug Habits," studied from a medical standpoint, deserves most seriously the immediate attention of all medical men to-day, since there is no other disease that wrecks more homes, destroys more manhood, robs more of their truthfulness, makes more honest men thieves, and finally takes from them their all, their life.

Why then should we have such a curse to the human constitution existing to-day?

It was once thought, and is now held by some that the first narcotic, in whatever form it should be taken, was a purely voluntary act brought about, possibly, by the youth thinking it manly to indulge, or by climatic influences—"it's cold, let's take a stimulant to warm us up and ward off a medical bill," or by association; where we see the tendency of our fashion leaders of to-day ignoring all lines of limitation, forgetful of the fearful results of fast living and dissipation, consequently we have fast victims to that terrible fate, narcotic inebriates.

But whilst we are discussing the voluntary act, youthfulness, climatology and association being excetant of these evils, one cannot lose sight of the medical men who use narcotics continuously, as they do, not being so extraordinarily careful in disguising their remedy, being one of the factors of forming these dreadful habits, then, not too much stress can be laid upon the carefulness of the use, dispensing and disguising these drugs.

The acquired habit is where we, as physicians, can do most good in eradicating these contemptible appetites; little harm will one dose of morphine or cocaine do if patient is ignorant of their comforter, but just here the secret lies, on similar occasions the same relief is sought, and, if remedy is found out, soon we have our victim, and whose fault? Please do not understand me as disapproving of the use of these drugs, and partial is the author to their use, for medicine would be a failure without them, but if there is any time when a doctor must deceive his patient it is when he inquires of the drug used.

The above mentioned etiological factors might have been the excitant causes generations ago and are still doing their deadly work, but since "the sins of the father shall be visited upon the third and fourth generation," the youth of to-day cannot be wholly responsible for his misdoings, for inheritance has given him a diseased brain and body textures, a wrecked nervous system and a depraved appetite which is not easily controlled and should be laid at the door of his forefathers.

But, summing it up, if it be due to maliciousness, if to careless administration of drugs, or to inheritance, we have by the intemperate consumption of narcotics, a very stubborn, disagreeable and unsatisfactory class of patients to treat; and as the field is too large to take them up as a whole, it will be the object of this paper to specialize upon one or two, that we may have a discussion.

Alcohol, in its various varieties, stands as a lighthouse, steering many tattered, weather-beaten, and wrecked constitutions to a safe and sound landing. Few names in the pharmacopeia can be called upon to aid in more diverse ways, and always lend a helping hand than the "King" alcohol when properly administered.

As an astringent, refringerant, anhidrotic, rubefacient, antipyretic, diapharetic, diuretic, stimulant, tonic, food, &c., &c., it is one of our most accessible drugs, but, like all good things, it is abused, so it is here the author desires to direct your attention this evening.

Then, in the beginning, we may make the statement safely, that "spirits" may be used in moderation throughout a long life without impairing the general health to any extent, but statistics show that vast multitudes are dying to-day from its intemperate

*Read before the Buncombe County Medical Society December 5th, 1898.

use, but this is not a discussion upon the moral effects of alcohol, so will look at it from the various pathological conditions and symptoms brought about by excessive indulgence. Acute alcoholism is the most prominent pathological condition where we find at the beginning a vascular relaxation of the peripheries, later, the brain and higher nerve centres becoming incompletely paralyzed. with disturbances and exaggerations of the emotions; some hilarious, others melancholy, some bostful others retiring, some violent, some drunk in the head, others in the legs, and finally succumb to alcoholic coma. In this condition we find the gastric organ, in an unsettled, uncertain—to say the least—seasick condition, its mucous membranes and vessels congested and having an angry, red, inflammatory appearance, with a muco-purulent discharge from bleeding points, which we find not an easy task to arrest after several debauches.

The patient may be in a state of quietude, or with various hallucinations, one of homicidal intent, another suicidal intent, infuriated absolutely beyond his control, seeking vengence upon his furniture, his brick wall, his wife or "anything that might come in his path;" after a time generally awakening totally ignorant of his actions. This kind of debauchery may be indulged in a few and limited number of occasions, but soon we have an undertaker's call or an entrance certificate to an asylum, which is worse. This habit is so prevalent and willpower so weakened, we will have to admit, is one of the greatest evils now existing; but while this habit not only wrecks the human economy, morally and physically, but also, so upsets the mental faculties that an adjuvant is called upon, and we have added to alcoholism, morphinism, cocainism and a complication to battle with.

Now picture yourself gazing upon the poor, unfortunate alcoholic victim gloriously happy in mind, generally found where there are sounds of mirth converse and liveliness, then for one moment imagine yourself in an opiate's den where we find in a secret chamber the poor victim, making not a sound nor a movement, but serenely happy in the calming and soothing effects of the opiate, leading its victim into quiet and blissful repose, awakening to find himself a most miserable, forlorn and forsaken being, finding refuge only in a repetition of his course.

When it is claimed that there are 150,000 morphine fiends in the United States alone, and when Mattison, 1894, makes the alarming statement that 70 per cent. of opium inebriates are regular practicing physicians brought about possibly by experimenting with the drug, or by their irregular life of exposure and loss of sleep. Or in the case of the layman if brought about by careless administration, pain, insomnia, neuralgia or what not, it demands of us the judiciary and guardians of health, a careful and due consideration before the administration of a drug which brings upon our people a habit which overthrows the will-power and leaves them a human wreck.

DISCUSSION.

Dr. S. W. Battle.—I really have very little to say on the subject. Of course it is easy for the physician to fall into the way of taking that which will give him rest, which he must have in order to proceed with his work on the following day, and I believe that the majority of physicians who fall into morphine habit at any rate, do take it up in just that manner. Of course I do not think that the doctor is more susceptible or that he is more liable to become a liquor fiend than other professions, perhaps. Indeed, he has every reason to keep his head clear. Of course many fall into the liquor habit and the morphine habit from the doctor having prescribed these narcotics.

Dr. J. A. Regan.—I think that the paper which has been read is a very interesting and important one. I do not think there is any subject which we have more to do with than we have the subject before us, that is, guarding ourselves and warning others of danger. You know that the word habit is derived from the Latin, I have you, or I got you. Now, I think that the illustration may be made in this way. You see a spider and a fly. The spider throws a thread around the fly, and of course the fly can break it. There is no trouble about his not doing so. But it is so little and insignificant that he makes no effort to do so, and another is thrown around, and another, until he gets his net bound around the fly sufficiently, and starts at him, and when the fly makes an effort he is fastened and the spider has him. That is the way it is with habit. You may take it in the habit of morphine or liquor or anything that has a tendency to produce habit of a dangerous character. A person takes a dose of morphine and they have power to stop it, but they go on taking it until finally the morphine has them, and it is the same way with liquor. I don't suppose there is a man in the world who wants to be a drunkard or go to an asylum, or come to a drunkard's grave, but he keeps tippling with it, and goes on until the point is reached where it has him, and when it has got hold upon him he has got the disease, it is fastened upon him, and it takes a moral effort, and

some times a good deal of medicine in connection with it, to prevent it. I recollect a case, the only bad case I ever had. He was a colonel, a man of prominence, and was a complete drunkard, drank day and night, until he lost the use of himself, could not stand on his feet, had not for months when I saw him. He had to have a chair with rollers to roll him to the table or bed or fire, wherever he wanted to go.

When I was called to the village where he lived to treat him the physicians laughed at the idea of saving that man. I took the strychnia before him and weighed it out, and measured the liquor that I gave him. "Now," I said, "Colonel, if you will take this according to my directions I am responsible for the effect of it, but if you go beyond my directions you are responsible," and no other liquor was he to have except that with the strychnia in it. At the same time I used upon his spinal column, and within six weeks I had that man so he could walk across the street, and he got entirely well, and could go anywhere he wanted to. The drink had perfect control of him. Some of the family had consulted with a prominent man to know if it would not be better to just let him kill himself, but that man lived thirty years after that treatment, and finally died of a different disease. I was not present when he died. He was a tetotaler from that day to the day of his death, making speeches and everything.

So far as the physicians are concerned, I am pretty well acquainted with all the physicians in North Carolina, the prominent ones. I was six years on the examining board, and examined over 300. In that way I became acquainted with them, and have no hesitancy in saying that I do not know any number of men of any character, farmer, mechanics or anything else, where you will find as large a number in the State of North Carolina, with as few with the habits of drunkards. There are a few, unfortunately so, but very few, and when I go to our annual meetings, and go to the meetings of the American Medical Association, I have never seen a drunken physician. I never saw but one at the State Medical Society, and we sent him home. He came before the Board in my room drunk, and I told the Board I would have nothing to do with him, and he was sent home. So far as the physicians are concerned, I say they are not more liable than other men, and I think less so, because I think they know the effect of it, and as a general rule they are sober and reliable men. I never saw one intoxicated at the meeting of the American Medical Association where there were 1,500 or 2,000 there, so that I am willing to defend the medical profession as far as I can.

I think the paper is a good one, and I think that it is a subject we are all interested in, to try to save our fellow-men. It is our duty to save men from ruining themselves and their families, and anything we can do to ward off that is in our profession.

Dr. G. Tennent.—I think, considering the importance of the subject, there are very few men who could give alcoholism the study that it should have. Dr. Reynolds in his paper notices the difference between acquired alcoholism and the inherited form, but I hardly think he drew the lines as strictly as they might have been drawn. Of course you can always trace the acquired habit, but you cannot always differentiate the case of inherited alcoholism from acquired, for the reason that the man who inherits the tendency to alcoholism or dipsomonia, may acquire the habit by the same means and the same manner as the man who does not inherit the tendency. I never thought about the subject until a year or two ago I read a very well written novel by Walter Besant. The hero is drawn from life, and is one of the most interesting psychological studies I have ever run across. This young man, who inherited a large fortune, was very bright, had inherited a good name, had no bad habits, and until he studied up his ancestry, had no idea that he had inherited a tendency to drinking, but after he acquired that habit he looked up this matter and found that he had two or three ancestors who were drunkards. In his senior year in college he waked up very thirsty one night after studying very hard for his examination, and drank some water, and next drank some claret he had in his room, and the claret quenched his thirst, but was not what he wanted, and he finally thought of some brandy he had and he drank a whole quart that night and was on a drunk two nights, but got over it. In two months from that time he waked up with exactly the same feeling. He had taken the precaution not to keep any liquors, but it seemed as if he must have some whiskey and so he waked up the janitor and sent him for some. It went on that way for about fifteen or twenty years, and regularly every two months he got on a spree, until finally he committed suicide. Of course that is typical dipsomania. There was no cause whatever, except some peculiar tendency which he had inherited. I think in treating patients it would pay those who have patients to treat if they would remember that very important case. An inherited pyschological condition is always ten times

more hard to cope with than an acquired condition.

Dr. M. H. Fletcher.—In regard to whether you can inherit a desire to drink whiskey, I think most of us who have a bad habit are looking for an excuse. I think it is possible to be a dipsomaniac, and most of us if we looked back could find an ancestor who had a habit of that kind. I should say 99 out of 100 was acquired. If a man has a weakness he must guard against that weakness, and this gentleman the doctor referred to ought to have studied up his history before. If he had he would not have touched it.

I wish I could agree with Dr. Reagan in regard to the statistics in reference to the medical men. The doctor states that about 70 per cent. of the people who contract the opium habit are physicians. I think that is true. The doctors who contract the morphine habit do not attend the State Medical Society or the American Medical Association. They have fallen by the wayside long before that, and are more apt to go to the Keely institute. We have a number of them. A thing I would like to hear is some remedy to help a man who is down with the morphine habit.

Dr. W. P. Whittington.—I am like Dr. Fletcher, I hope that somebody will tell me something about the treatment of drug habits. I thought that the paper would perhaps say something on that subject. I am very much interested in the drug habit, especially in the morphine habit. For a number of years I have given considerable attention to looking up this question. It seems to me that while there is a difference of opinion as to the use of alcohol in the profession that difference is very well explained in Dr. Fletcher's remarks. We have some bright men who drink alcohol, even wood alcohol or Jamaica ginger when they cannot get anything else, and one cause of that is our arduous labors, our long strains, and a man seeks something to give him strength and ability to meet the obligations that fall upon him. I believe that we are very largely to blame for the morphine habit, but also for the alcohol habit, because we do not give these things the attention we ought to. We spend hours and days and weeks pouring over the journals and the text books for a remedy for tuberculosis or epilepsy, and all other diseases that human flesh is heir to, and we say, that man is a little drunk, or he has too much morphine, and we will send him to Keely, or kick him aside. This ought not to be. One of our most eminent physicians has published his remarks over his signature that we have a remedy for alcoholism, and that is strychnine. It seems to me that the basis of the Keely treatment is strychnia, supported by those valuable tonics, the different preparations of gold, gentian, iron, bromides, etc. While we have no drug that will substitute and destroy a man's desire for the effects of morphine, I believe we have a sure method of curing every man who is addicted to the excessive use of morphine. I say a method. I don't mean we have a remedy, but I believe if we look this matter carefully up that any physician in this house can cure any man of the morphine habit, no matter how long he has been taking it, or how large the dose, that is, if he has no constitutional disease which requires that he use morphine for the purpose of relieving pain. That should always be taken into consideration. In cases where we cannot cure the disease we have to give him up to the use of the morphine. But in the treatment of the morphine habit there are two or three drugs which come in very nicely in practicing this method. Whenever you see published in the papers a remedy for the morphine habit, you can put it down as a fraud, because all those treatments are only methods, and if you will ascertain in the beginning the amount of the drug the man is taking, and find out what is the proper use of your substitute, you can relieve every single one by this method, and the drugs used for that method are codine, gentian, strychnine and bromides, with the proper tonics and nourishing treatments that are necessary to put your man in proper condition. I have cured quite a number of very severe cases of morphine. I cured a gentleman in this city not long ago who was almost a raving maniac. His wife thought of sending him to the asylum. Now he is entirely cured. You must give the man a good wholesome vegetable purgative. Give him an eliminative treatment. Get rid of all those poisonous compounds. Then after you have gotten the man in condition to justify it, rapidly reduce his morphine and increase your other drugs in proper proportion until you get him off the morphine. Then rapidly reduce your other treatment, support the system by good diet. You must be a judge of the man's condition, of his constitution, what he will bear and what he will not. But if you do not watch he will cheat you. A man will suffer some while you are treating him, but if you will hold him and treat his symptoms as they come up you can relieve any man of the morphine habit, or the need of the morphine inside of three weeks, and in three more weeks you can have him on his feet and give him his freedom and put him back in business, and he

will have no desire whatever for morphine and the bromides, and if you will use these methods properly, increasing one and reducing the other up to a certain point, you can take any man in North Carolina who has nothing the matter with him but the morphine habit, and inside of six or twelve weeks he will be a well man. Now, will he stay well? When a man is in the habit of taking morphine he thinks he is bound to have it, and he is unless it is taken from him in the proper way, and when a man has once been a subject of the morphine habit he is robbed of his manhood to that extent. He is more liable to fall into the habit again if he ever has neuralgia or toothache than he was formerly, and that is where the danger comes. I cured one man of the morphine habit who had been using it for ten years. I cured him, and in three months after he began the treatment he weighed more than he had in ten years, his skin was in better condition, his rest and appetite was better, and he was more like he was in his younger days than he had been for ten years. He was then a man of about 60. He went on for eight months, and at the end of eight months he had a severe spell of neurelgia, and he says: "Now I think I can take a dose of morphine and it won't hurt me." He sinned and fell, and went back into the habit again. Since then he has been treated by another physician and I suppose is properly cured so far as I know. But some of them will not fall, if you can keep them from the morphine again, because it has a fascinating influence, and when a man once knows what they call the joy is, he is more prone to fall into it again. But I say we ought to look up these things, and when we see our patients inclined to go that way we ought to stop it at once, by using such treatment as is required.

Dr. Walker.—I am going to be a little personal in this matter. I have been a railroad surgeon for thirty years, and have been through the coal disticts and have a great many accidents to attend. I come in at night as tired as can be, and when I come in I take a glass of hot milk. I am not one of these gooddy-good men, because if I want whiskey or wine I will take it. I have a good many German friends who own vineyards and they frequently give me wine, but I cannot say that I like it particularly. Speaking of the morphine habit, I was called in to attend a young lady who had neuralgia. She suffered intensely, and when I was called in she said she had morphine injected every day. I injected a quarter of a grain. I kept that up every day. One day she said: "You will never inject morphine for me again." The next day I called, and she hinted very strongly for morphine, but I did not give it to her, and she has never taken morphine since that time, which shows what a woman will do when she makes up her mind.

Dr. James Sawyer.—You frequently find that those who drink in secret are the drunkards, and those who drink openly are the ones who never suffer from it. One of the chief injuries of drinking is not from the alcohol, but from the ingredients put into it; in other words its impurities. For instance, in New York recently I was in a restaurant, and they gave a table d'hote for 75 cents, and for 80 cents they gave a small bottle of claret. You can imagine what sort of claret it was for 5 cents. I just wanted to add those two points, impurities and secrecy. They are important and should be looked after.

Dr. L. B. McBrayer.—I did not intend to say anything, but I will have to reply to the doctor who has just taken his seat. In the first place the W. C. T. U. has a pretty strong plea against this convivial drinking, and I have had these habitues tell me they get along very well unless they meet some of these old friends, and then they must go and take a drink, and when they have taken the first drink they never know when to stop. Again, as to the impurities, it is hardly worth while for me to remark on that point, as the author of the paper this evening spoke of the effect of alcohol upon the stomach, and the pathological effects from poisons which is too well known to mention.

Dr. J. A. Burroughs.—I just wish to say I don't believe in the theory of heredity in drug habits, especially in the whiskey habit. If that was true it seems to me that the whole human family would be one of drunkards. The first thing that old man Noah did when he landed the ark—and all in the ark were related to him—was to plant a vineyard and proceed to raise him some grapes and get some wine, and get very, very drunk. I am sorry the old man became intoxicated, but I am glad he had his wine. I think it is a good thing to have. I would just say this in regard to this liquor drinking. It is one of the greatest curses of the age, and a thing that physicians have but little to do with beyond helping a man up, as Dr. Whittington suggested, but regarding the morphine or opium habit I do think that physicians are largely responsible for the number of cases. It is very rare that the laity purchase opium or morphine without prescription of the physician. It is generally given by a physician, very often started that way, and the physician does not keep watch on them, and by letting

them know what the drug is when they purchase the drug. They think they have a gauge on themselves, and little by little the habit has gotten on them. I must say that I differ with Dr. Reynolds' statement. Wherever he got his statistics they are incorrect about saying there are 150,000 people in the United States with the morphine habit. If he had said half a million he would have been nearer correct. In regard to 70 per cent. of those addicted to the morphine habit being physicians—that is incorrect. The statistics are wrong. According to Polk's last directory there are 115,000 physicians in the United States and Canada. There are no 70 per cent. of those addicted to morphine. I know that physicians do some times get into the habit of taking narcotics, and then they want something a little stronger and a little stronger, and the first thing you know the devil has them, but there is no such per cent. as that. I am not prepared to accept it.

Dr. W. P. Whittington.—There is one great trouble about curing the morphine habit, and that is there are a great many people who don't want to be cured. They won't even give a small sum to give it up until they are broken down and pauperized and have no will power to build on.

Dr. G. Tennent.—I want to emphasize that it is a well known fact that there is such a thing as typical dipsomania, and that it is inherited from two classes of ancestors. It is inherited from one who is a dipsomaniac himself, chock full of whiskey all the time, and I think we have these typical dipsomaniacs.

Dr. A. M. Ballard.—I am sorry I was not here in time to hear the paper. In regard to the effect of morphine I would like to quote what Dr. Ansley, the eminent English physician, says on this subject. He says that morphine given hypodermically does not weaken the appetite or digestion, is not putting the truth strong enough. He says: "I will say that the use of morphine in legitimate doses hypodermically does not weaken the appetite but strengthens it, and strengthens the digestion, and when you consider the frequency with which it is used all over the civilized world, and the fact that statistics seem to show that very few of those who become addicted to it commence to use it by using it for medical purposes it cannot be said to be a dangerous drug to use. Of course," he says, "you should guard against the continuance of it longer than absolutely necessary. It seems to be to the human organism what oil is to machinery, lubricates the bearings."

I also think with Dr. Burroughs that a very small proportion of the morphine takers are made so by commencing to use it for medicine, but most of those make themselves so by taking it up to splice out, so to speak, their strength. They live a dissipated life, and I think statistics show that a pretty large percentage in our cities have taken it up just for that purpose. They are up all night possibly dancing, and possibly the next night have to be up again. They feel jaded, and, of course, they resort to the hypodermic syringe, and among a certain fast class in our cities it is very prevalent, I think. I would not like to have it go out from here that the morphine maniacs are started mostly by the medical men. I don't believe any such nonsense.

Dr. E. B. Glenn—I wish to say that every man who has to take a narcotic to stimulate him to do more work should leave off some of the work and not take stimulants.

Dr. C. V. Reynolds.—I tell you it would do my heart good if the statistics would not bear me out. These gentlemen do not want it to go out from this Society that the physicians themselves are greatly responsible for the morphine fiends to-day. You mention to me a layman down here in the backwoods that doesn't know anything about drugs—who knows nothing about morphine—you let the physician go into a house where it is absolutely necessary to use morphine; he will not give that patient morphine five days until some member of the family will find out what he is giving. Then it is known to that family that morphine is used to relieve pain. The consequence is that some other member of the family will take the morphine or will give it to somebody else, and in that way it is carried, and if you sift the thing to the bottom you will find that the physician is not only partly, but wholly responsible for the morphine inebriates to-day.

In regard to the 70 per cent., I do not believe it is quite that large, but those are the statistics. Mattison alleged that in 1894, and I thought 150,000 was a pretty large number to be in the United States, but Dr. Burroughs went me two or three better, and I think if he will read up carefully he will find that his statistics are a little wrong.

I thank you, gentlemen, for your lively discussion. There are a great many other points which might be brought out, but as foodstuffs are better than drugs, I will retire in favor of Dr. Burroughs.

"Papa," said little Johnny, "they're not in 'it.'" "What are not in it, my boy?" "Why, the other twenty-four letters of the alphabet."

General Infection by the Diplococcus Intracellularis in an Infant.

By John Zahorsky, M. D., Assistant to the Chair of Pediatrics, Missouri Medical College; House Physician to the Bethesda Foundling Home.

The report of a case of septicæmia due to the diplococcus intra-cellularis by Gwyn (Phil. Med. Jour., Vol. 2, No. 24) recalls a similar case in an infant that occurred in the Bethesda Foundling Home of St. Louis in August, 1897.

The patient was a boy 15 months old. He had been an inmate of the Home since his first month. Several times during his early months he suffered from gastro-enteric infection. At seven months he showed very evident signs of rickets. He had been fed on cendensed milk. This improved under treatment. In March, 1897, he passed through a severe attack of pleuro-pneumonia. After this he gained in weight and became a fine looking baby.

On June 11th he received a heat-stroke. His temperature at that time rose to 108 deg. F. Under cold baths and stimulation he recovered. Considerable anæmia followed. Since the early spring of 1897, he had a suppurative otitis media. This improved under treatment, but had not entirely subsided when he developed acute lepto-meningitis. It seems possible that the infection extended along the auditory nerve to the brain.

Sept. 2, 1898.—Infant has high fever. After a careful examination no cause for it could be discovered. Prescribed pilocarpine.

Sept. 3.—Fever continues persistently at 105 deg. to 107 deg. Stools slightly offensive. Infant with this hyperpyrexia is very bright and playful. Takes food readily and does not seem very sick. Excessive pulsation of the anterior fontanelle is noticed. The blood examination shows a hyperlencocytosis.

Sept. 4.—Patient takes less food. Vomited several times. The anterior fontanelle is bulging, and exhibits a strong pulsation. Ice bag to the head and iodides.

Sept. 5, 9 A. M.—Anterior fontanelle very tense, foul stools; used enteroclysis. Pulse rapid, regular. Vomited several times. Dullness over left lung.

6 P. M.—Infant has been stupid all the afternoon. Has twitching of right side. Constipation. Urine passed freely. The existence of right hemiplegia easily made out. Extremities are cold. Slightly mottled skin. Temperature 103 deg.; pulse 112, and irregular; respiration irregular, almost Cheyne-stokes. Right pupil very much dilated; left contracted. Paralysis of right ocular muscles. Left eye more prominent, veins distended (suspect sinus thrombosis). Coronal and saggital sutures are wide open. Clonic spasms of right foot. Hyperæsthesia of the skin. Dullness over right lower lobe of lung increased.

Sept. 6, 10 A. M.—Coma, absence of all reflexes—even corneal—rigidity of extremities and trunk, more marked on right side. Had one general convulsion during the night. No petechiæ or blood extravasations found. Large peliomata of skin. Death by apnœa; respiration ceased several seconds before heart stopped.

The post-mortem examination, a few hours after death, revealed the typical picture of a meningo-encephalitis. Namely, enormous congestion of the pia, and arachnoid and an intimate adhesion of the pia in places to the brain substance. The cerebro-spinal fluid very much increased and milky in appearance. The soft membranes of spinal cord to the second dorsal vertebra, also very much inflamed. The whole cerebral meninges covered by a yellowish fibrino-purulent exudate. The encephalitis was most marked over the motor area of the left hemisphere. Here existed a very intimate adhesion of soft membranes and brain, and the latter was very much softened. Marked congestion of dura over the region of the middle meningeal artery was noticed.

The exudate was found at the base of the brain and under the tentorium, covering the pia on the superior vermiform body of the cerebellum.

The right motor oculi and patheticus showed marked neuritis. The tegmen tympani was not perforated, but on the left side a marked auditory neuritis was present. The cochlea and semi-circular canals were infiltrated with pus. Thrombosis of the left lateral sinus also existed.

The pleural cavities contained considerable fluid. Extensive adhesions were present on the right side due to the previous pleuro-pneumonia. The lung exhibited marked congestion of lower lobes and considerable œdema. Heart large, no pericarditis. Valves of heart reddened but not thickened. Thymus gland was normal. Liver looks pale, spleen normal. Intestine distended with gas and contains foul, fæcal matter. The lymph follicles of large and small intestine were infiltrated and swollen. The bladder was distended with urine. Kidneys congested.

Cultures were made from the cerebral exudate, from the congested lungs, and from the blood and kidneys. From each of these sources pure cultures of the diplococcus intracellularis meningitidis were obtained. Evi-

dently in this case a septicæmia due to this micro-organism existed some time before death. The pneumonic congestion, which resembled very much the first stage of croupous pneumonia, was probably due to a localization of the meningococcus.

In conclusion, allow me to point out that a very high fever, occurring suddenly, and not producing in an infant signs of prostration and malaise points to meningitis. This symptom occurs in nearly half the cases of acute leptomeningitis. It is due, no doubt, to a disturbance of the heat regulation without toxæmia. I have found this sign a valuable aid in the early diagnosis of meningitis.

1635 S. Grand Ave.

Differential Diagnosis of Diphtheria from Membranous Croup.

By T. T. Ferree, M. D., Asheboro, N. C.

I am aware that the identity or duality of croup and diphtheria is still a mooted one. Excellent authorities differ on this subject.

Bishop says "Both diseases affect the mucous membrane with the result of producing a false membrane. Both diseases attack the same organ—the larynx. Both obstruct respiration. In these three particulars there is a close similarity in the two diseases, but the author is not prepared to admit their identity." We live in an age of progressive thought; the watchword is "go forward," and the science of medicine is making strides to-day that astonish the outside world. I believe that the healing art is just in its infancy. The physician who thinks he knows it all, and no more for him to learn, will soon be relegated to the things of the past. As I wish to come right down to facts and be thoroughly understood in regard to the position I take relative to the differential diagnosis of the two mentioned troubles of which I speak in this article, I ask, What is diphtheria?

Hughes defines it to be "an acute, specific constitutional disease, both epidemic and contagious, beginning by an affection of the throat characterized by a local exudation and glandular enlargements, attended with fever, great prostration of the vital powers and albuminuria, and having for its sequelæ various paralyses."

Holt says, "Diphtheria may be defined as an acute, specific, communicable disease, due to the bacillus of Klebs and Lœffler. It is usually characterized by the formation of a false membrane upon certain mucous membranes, especially those of the tonsils, pharynx, nose, or larynx." I think these two authorities make the subject sufficiently plain, and further effort to define the troubles would be unnecessary. What is membranous croup—true croup, or croupous laryngitis?

Hughes says, "An acute inflammation of the mucous membrane of the larynx, attended with the exudation of a tough secretion—the *false membrane*, and the occurrence of *spasm of the glottis*; characterized by febrile reaction, frequent ringing cough, dyspnœa with loud inspiratory sound, and altered or extinct voice, showing a strong tendency toward death by asphyxia.',

Bishop says, "Croup is an inflammation of the mucous membrane, mostly confined to that part of the larynx superior to the vocal bands, but it may extend to the trachea. It is attended with the formation of an exudate, or inflammatory lymph, that is deposited in the form of a fibrous membrane on the epiglottis, the ventricular bands, and to a greater or less extent upon the vocal chords."

I wish to arrange the points of differentiation in a way that they may be seen at a glance. The points of difference which I wish to exhibit are given by Hughes:

Membranous Croup.—A local disease. Begins in trachea and extends up. Exudation never cutaneous. No pain in swallowing. No swelling of sub-maxillary and lymphatic glands. Cough always present, and often reduced to a mere whistle with peculiar metallic ring. Not traceable to local drainage; seldom occurs in adults; neither contagious nor infectious. A sthenic disease; membrane does not extend to nares. No symptoms of septicæmia. No albuminuria. Neither attended with, nor followed by paralysis. Death seldom caused by syncope. Death due to suffocation. Absence of specific germ.

Diphtheria.—A constitutional disease. Begins at tonsils and extends down. Exudation often cutaneous. Often severe pain in swallowing. Swelling of sub-maxillary and lymphatic glands. Seldom much cough and then only hoarse. Often traceable to local drainage; often occurs in adults. Both contagious and infectious, both before and after death. An asthenic disease, often extends to nares and many other parts. Septicæmia generally present. Albuminuria frequent. Paralysis not uncommon. Death from syncope common. Death frequently results from other causes. Presence of the Klebs-Lœffler bacillus.

If the points of differentiation of the two diseases referred to in this article can be relied upon, then the dual nature of the two troubles can readily be seen. Since 1887 I have had more or less to do with diphthe-

ria, from the very mildest to the most desperate cases, but I thank God I have never lost or had to die a single case under my treatment yet.

I have had four cases of membranous croup, and I am sorry to say that three of the cases died. A case of membranous or true croup once seen will never be forgotten by an observing mind. I want to emphasize the fact that while diphtheria is both highly contagious and infectious, both before and after death, membranous croup is neither contagious nor infectious. Three of my cases of croup were in families where there were several children, but none of them ever contracted the disease. One of the patients I had to die was a very bright little girl. A favorite of all who knew her. At the funeral she was kissed by quite a number of children, but no trouble ever followed.

It is remarkable how the strength of a child suffering from membranous croup will keep up; there is not that amount of depression of the vital powers that is seen so soon in diphtheria. I have seen the little patient not five minutes before death walk from father to mother with uplifted hands as if to beg for breath. They die purely suffocated.

I am so much interested in the investigation of these desperate throat troubles that rush so many thousands of our bright little folks into untimely graves that I am tempted to prolong this article further, but I will desist at present with the hope that abler pens will take up the subject and give the medical profession the benefits of their experience. Owing to the length of this article I will not suggest any line of treatment, but may, in the near future, offer something along that line should this paper steer clear of the waste basket.

Membranous Croup (so called) and Diphtheria.*

By I. A. McSwain, M. D., Paris, Tenn.

The term membranous croup is misleading, and by modern writers is used only as a synonim for diphtheric laryngitis.

True there may be formations of false membrane in the larynx in which the specific infection of diphtheria is not found, and the same may be said of such formation in the fauces or on the tonsils.

To such non-infectious formations of false membrane the term pseudo-diphtheria is given. It may be said that such exudations are of infrequent occurrence, except in scarlatina and measles, or possibly in an exceptional case of acute inflammation of the mucosa.

In all such cases the streptococcus is usually the cause of the trouble.

It is now well understood that the Klebs-Loeffler bacillus is the cause of true diphtheria and that an exudate in which this bacillus is found is diphtheritic, whether its locality be the fauces, tonsils, nasal cavities or larynx, the difference being not in the nature of the disease, but in the clinical picture, and this is due solely to the functions of the organ, or the character of the tissues involved, and the medical man who would undertake to say that when an exudate forms in the throat which is visible to the eye it is diphtheritic, but when symptoms of laryngeal obstruction manifest themselves that the disease is membranous croup and not diphtheria, involves himself in a hopeless tangle and is liable to commit gross errors in the management of the case. The more so from the fact that notwithstanding the greatly improved methods of diagnosis, a large majority of practitioners must depend on a clinical examination in the treatment of these cases—and the distinction above mentioned between croup and diphtheria should now be regarded as an approbrium in medicine—for its most natural sequence will be a large fatality in so-called croupous cases, because of a failure or neglect to use anti-diphtheritic treatment.

SOURCES OF INFECTION.

The old and oft repeated declaration that the patient has had no opportunity to "catch" the disease, and, therefore, cannot have diphtheria, has often resulted most disastrously to the patient and the public, and the physician must not let such statements bias his opinion.

This is an age in which nothing is taken for granted, and no physician should feel content in his diagnosis until he has exhausted all resources for confirming it.

The bacillus of diphtheria is known to be long lived, and attaches itself to all sorts of fabrics—clothing, books, furniture, wall paper, the upholstered seats of railway coaches, and many other things may become carriers of the infection, and thus it may be transmitted over long distances, and after the lapse of much time, and no one may be able to trace the origin of the disease. Cats, dogs, and other domestic animals, may be a means of transmission, and perhaps such animals do themselves contract the disease.

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*Abstract of a paper read before the Tri-State Medical Association of Arkansas, Mississippi and Tennessee.

In all suspected cases a bacteriological diagnosis should, if possible, be had. Not every doctor owns or can use a microscope, but if at all convenient a specimen of the deposit or sputa from the throat should be collected and sent at once to some one familiar with the instrument and capable of bacteriological examinations.

Proper isolation of cases and treatment, however, *should not be delayed* by waiting to learn the results of such an examination, but should be instituted *at once*.

This is a disease in which delays are ruinous; and as it is impossible for the clinician, in the absence of the microscope, to state positively whether a given case is or is not specific, that is, that the bacillus of diphtheria is or is not present, is it not better to treat all cases of well defined membranous formations on the mucosa as though they were diphtheritic until proven to the contrary?

The same may be said of croup cases, that do not yield to ordinary remedies in a short time.

Just here is a source of error and a fatal one to many a bright eyed child and a blight to many a home.

Cases are every day being pronounced croup. Ordinary remedies and a favorable prognosis is given, and two days afterward they are dead.

A croup that does not yield to an emetic, and a few doses of coal oil, and a purgative dose of calomel, should be strongly suspected as a case of laryngeal diphtheria, and be treated at such.

TREATMENT.

It would appear to many of us scarcely necessary to refer to the treatment of this disease; for by this time the efficacy of antitoxin should be known every where, and be in common use by all; yet all over the country, especially in the rural districts, children are dying by the score who might have been saved by the timely recognition of the disease and the prompt use of the remedy. Aside from the use of antitoxin in the treatment of diphtheria, we have little to say and but little consolation to offer.

But by its *early* use in *full* doses a frightful mortality of a dread disease has been reduced from about 56 per cent. to about 12 per cent. of cases, and if used the first day of the disease to about 4 per cent. of cases.

These statements, though bold, are confirmed by the best authorities, and abundantly sustained by those whose experience are entitled to full credit.

The writer begs pardon for referring to his own observation. For four years he has not lost a single case of diphtheria or membranous croup (so-called), and has used antitoxin in every one.

To sum up the contents of this paper:

1st. Diphtheria and membranous croup should be regarded as identical.

2d. A membranous formation is sometimes seen in which the bacillus of diphtheria is absent, and hence called pseudo-diphtheria.

3d. The only way to differentiate between the two is by a bacteriological examination.

4th. Delays in isolation and treatment should not be made pending a bacteriological diagnosis.

5th. Croup that does not yield in a reasonable time to simple treatment should be suspected and treated as diphtheritic laryngitis.

6th. Antitoxin is the rational, scientific and indispensable remedy in the treatment of these allied conditions.

7th. It should be administered early and in full doses.

8th. We would not be understood as utterly ignoring all other treatment, for many agents are useful as adjuvants, but this paper has reached its limitations, and its purpose has been to emphasize a few points only.

The Prophylaxis of Ophthalmia Neonatorium.

By Harriet E. Garrison, M. D., Dixon, Illinois.

To prevent disease is now the study of every intelligent physician. But, if he fails in preventing the disease, then his aim is to limit its ravages to the least possible amount of damage. That this may be done our scientists are placing every organ and secretions of the body, in health as well as disease, under powerful microscopical examination for germs, both malignant and beneficial. But we have long since learned that it is useless to find the disease producing germ unless, as a means, to compass its ultimate destruction. Even the scientist receives no reward but renown, and sometimes a martyr's grave, as have the searchers after the germs of the bubonic plague in Vienna.

The question of germs being well on the way of thorough investigation, it now remains to continue the investigation for means to destroy the power of the malignant germ without imperiling the tissue in which it is harbored.

For several years I have, in my obstetrical practice, been looking for some means to destroy the germ which is fraught with so much misery to both patient and friends

as that which produces ophthalmia neonatorium. Whether the germ be the gonococcus, or of non-specific origin, the results of its ravages are very direful.

All the treatments outlined in the text-books seem unnecessarily severe, unless we are sure of a malignant source of contagion; and none can be more malignant than the fresh gonococcus; and I am not sure but a very strong salt solution may be destructive to this germ. My observations have not given me an opportunity to make a thorough test.

After using an application, while an interne in the Hospital for Women and Children in Chicago, similar to Crede's silver nitrate, my mothers made such strenuous objections that I gave it up in private practice and only saw to the eyes being washed out with clean warm water.

After a trial of various applications I found that, where there was any symptoms of conjunctivitis during the first week after birth, a solution of salt, chloride of sodium, as warm as could be used without injury to the eye, and used thoroughly, would relieve all inflammation. Then, as it was no more trouble to apply the salt solution than clear water, I began to use it as a prophylaxis. In the five years in which I have practiced washing out the eyes of every new born babe among my clientele with this solution I have never had a case of ophthalmia neonatorium, where I have taken plenty of time and care in making the application. Occasionally, where the cleansing has been done hurriedly, there has appeared a little serous effusion on the edges of the lids; but under a thorough repetition of the salt solution it would speedily disappear.

My method of procedure is to take boiled water in a teacup, add a teaspoonful of table salt while scalding hot, then set it to cool, while I get the child ready. The babe has had its first bath, as the water in which it is bathed may find its way into the eyes carrying along diseased germs. If the room is not very warm it is dressed before the eyes are cleansed. The babe is placed across the knees, a thick folded napkin under the head. If I am intending to irrigate the right eye, I place the child upon the left side, pour in the water at the outer canthus and it will flood the eye and pass out at the inner canthus. If the lids are much swollen or the eyes are kept persistently closed, I gently part the lids, using as little force as possible, as the more force used the more the child will resent and draw the lids more closely over the eyeballs, and thus prevent the solution from reaching the angles of the conjunctiva, unless the lids are completely everted. If possible I try to pour the solution from a teaspoon into the eye while the child is gazing around. Of course, the eyes will be closed at the first douche, but if the pouring has been gently done it will soon re-open the eyes.

If the eyelids are very œdematous from pressure on the head during delivery the conjunctiva of the lids will be bright red from passive congestion. This redness will disappear as spoonful after spoonful of the salt solution is poured into the eye.

Never hurry matters. This is one of the occasions when time and patience should conquer.

After the solution has cooled to the temperature where the eye will not be injured by the heat quickly and gently dash it into the eye. After using a spoonful wait until the child again opens its eyes.

I have found this method of treatment simple and preventative; requiring nothing but painstaking care on the part of the physician, and not objectionable to the mother as, when properly done, the child but feebly resists.

Questions and Observations on Pernicious Malaria, or Hemorrhagic Malaria, Hemorrhagic Fever, Yellow Chills, Yellow Disease.†

By E. T. Dickinson, M. D., Smithfield, N. C.

I am best acquainted with the type which I think should be known as yellow disease, since the chill is slight, and is no ill omen in itself. What is the nature of this condition, what the real cause and its source? The usual definition is: "It is remittent fever of peculiar type, characterized by sudden jaundice and bloody urine." Its spread has been so recent and its occurence so limited to certain localities that adequate investigation and literature have not accumulated. All admit its close relation to ordinary intermittent and remittent malaria; but where lies the great difference—one being so malignant and the other so benign? Is the difference one of degree or one of kind? Why hæmatogenous jaundice in the one and hepatogenous jaundice in the other?

From the total number of eighteen cases coming under my observation and care I have been unable to obtain a history of a single case that had suffered previous ill health or a succession of chills. Indeed the general history is that they were unusually well. So it would seem that it cannot be a gradual accumulation and multiplication

†Read before the Seaboard Medical Society at Wilson, N. C.

of the different types of malarial poisoning in the system which finally explodes with one mighty shock, overpowering the energies battling against it, and decomposing the blood with its electric force. It cannot be distinguished in the beginning from an ordinary chill nor can it be differentiated until the icterus of the skin takes place.

Many cases of hæmaturia occur with and after chills, that are in no sense hazardous, and really make but little impression on the system, nor does the hæmaturia return, even without the aid of quinine. I have seen no case prove fatal or serious, except those in which the hæmatogenous jaundice occurred, but no case in which this jaundice appeared has proved otherwise than fatal, or very serious, and made a very slow and doubtful recovery, requiring several weeks to regain even ordinary health. But unless the physician is more honest than is often to his credit he will forget conscience and report all cases of any jaundice, with or following chill and hematuria as one of pernicious malaria, on which his apt remedies have had the happy effect desired.

To one who has seen a case of yellow disease from begining to end can there be any doubt as to differentiation of this jaundice from that accompanying the milder forms of malaria? I think not. The former is too plain for comfort. The difference is that in milder malaria there is a gradual development of hepatogenous jaundice, this development extending over several hours, The discoloration always being obscure and dingy, there being great contrast between the hue of the conjunctiva of the eye and that of the general skin. But in the pernicious form the jaundice is hæmatogenous, due to destruction of the red blood corpuscles, and it develops very rapidly, usually appearing almost suddenly about two or three hours after the chill, and the discoloration gives to the skin a peculiar metallic luster very much resembling that of gold, yet not altogether so vivid. This one discrimination properly made will enable any one with ease to diagnose this disease, or certainly to differentiate it from the milder malaria.

But other important symptoms are a rapid, weak and often flickering pulse, usually reaching as high as 160 pulsations per minute, extreme, incessant and distressing nausea and vomiting, a tendency to dry skin and mucous membrane with not very frequently an extremely high temperature, the majority of cases presenting a temperature between 102 and 103 degrees, which persists without fluctuation except slight morning and evening remissions and exacerbations. How shall we prevent the occurrence and spread of this dreaded disease? This is a question of momentous importance. This disease has been spreading rapidly during the last five years, and as yet we know nothing practically of its source. But we look for and believe it to be, where least preventable—in the low, swampy and marshy bottoms, and that it is transmitted to us through the atmosphere at night. This, however, needs proof.

Two observations I note as peculiar:—1st, Smithfield is situated on the East bank of Neuse river, and contains more inhabitants than the zone of country with a radius of two miles around it. There have occurred in this zone in the last three years more than twenty well authenticated cases of this disease, and many more of simple hæmaturia. But in the town there has not been one case, and so far as I know not even one case of hæmaturia. 2d. In this zone the white and the colored population are about equal, yet all the pernicious misfortunes have visited the whites, not one the colored, though I have seen three cases of slight hæmaturia in this race. Is the negro immune from this disease? Then his serum may yet prove useful in a higher science than "Manlyan" politics.

How can we best treat the disease? I believe as nearly an iron-clad rule can be adopted in this disease as in any we know, though there are many points of individual difference. Of chief importance is to avoid those remedies that are sure to kill. These four things—morphine, atropine, heroic purging and heroic cinchonizing—I have learned to avoid as I do a grave-yard. Yet I believe every text-book I have examined recommends the first of this list. Morphine or atropine given for restlessness and nausea only increases both and paralyzes the secretion of all glands, the kidneys included. A gentle, sure, purgative is efficient and demanded. But too heroic purging with the vain hope of removing the jaundice, misjudged to originate from the liver, serves only to further exhaust the already much depressed vitality, and thus knocks its last leg from under it. Quinine in sufficient doses to kill an entire family in perfect health, I believe, is capable of producing more deaths than the disease itself, unassisted.

What are the conditions that must be relieved? After arranging to get surely into the circulation 15 grains of muriate of quinine every twelve or six hours only two important conditions are to be met, and these successfully combatted and patient tided over twenty-four hours one may feel comfortable for the first time. These are nausea and anæmia.

Nausea may almost always be relieved by avoiding morphine and giving 3i or 3ii of Pot. Bromid every 3 or 4 hours or 20 or 30 grs. of Lithium Bromid equally often. Also, these are all that is necessary for the restlessness. The anæmia and decomposed blood I believe to be the real cause of all the deaths. This is as true exsanguination as that from a spurting artery. Then what is to be done? Two conditions are to be met. A new circulating medium is to be supplied and the debris of decomposed blood removed. The circulation might be supplied by intravenous transfusion but I have never done it. I have used instead large subcutaneous injections of saline solution into the cellular tissues, and large saline injections per rectum. I thought this to do much good, though one case proved fatal in which it was used, but I believe it greatly prolonged life in this. In all cases the pulse grew slower and stronger, thirst was established and nausea succumbed to its demands, and the kidneys secreted more freely. How renovate the blood? Give no remedy to check hematuria, as it is only decomposed blood that nature is relieving herself of. The object is rather to encourage this free flow of bloody urine. It is seldom a case dies if the kidneys are doing their duty well.

Other symptoms are to be relieved as the indications demand. If fever is high, skin dry and hot, or liver at fault, these must have attention. As an all round remedy for these conditions, and also to keep the kidneys active two grains each of acetanilid and caffeine citrate and four grains each of salicylate of soda and ammonium bromide, all in one powder or capsule every two or three hours I give with satisfactory effect. On the above outlined plan of diagnosis and treatment my mortality rate has been 33⅓ per cent.

Report of Three Cases.

By R. H. Hale, York Station, Ala.

In asking for space in the columns of this Journal, I feel that I am facing the criticism of those whose experience and position in the ranks of the profession place them as criterions whom the lesser practitioners may do well to emulate. But, notwithstanding this, the doctor who expects to establish himself in the community in which he locates, and command the respect of the profession and laity, must of necessity possess two qualifications. His firmness and positive declarations must be founded upon a thorough knowledge of that which he treats, and this must be shown in a manner that will impress it upon the minds of those with whom he comes in contact.

His assertions must have as a basis common sense in connection with this knowledge from his text-books. Equipped with these as his armamentarium he goes forth to battle against the thousands of isms which always confront the country practitioner, and found in battle array at the bedside of every patient; but he wins, and crowns his efforts with victory. This may be strange reading to city physicians, though every country doctor knows these from experience.

With this prelude I will proceed to give my experience in the treatment of three cases as follows:

A child seventeen months, of a scrofulous diathesis, suffering from acute catarrh, was taken with severe rhinitis, together with pharyngo-tonsilitis fever aggravated by a malarial influence, which altogether seemed to be one of those cases that give the physician so much annoyance. Treatment was by inunction and local applications, with enema on account of continued and excessive nausea and vomiting, which came near producing convulsions with each attempt. It also caused great thirst, and water was the one word uttered.

By local application of sulph. iron and cocaine, and followed at once with glycothymoline i3, water iii3, which was eagerly taken. She was allowed to take nothing else. The swelling of the glands was so great as to render deglutition difficult was why the iron and cocaine was used. After a few hours the vomiting ceased, the inflammation subsided, and in 36 hours the child was well. Had I used the last treatment at my first visit could have saved more than a day's intense suffering.

A case of erysipelas from an ingrowing toe nail of a maiden lady about 40 years, which had extended over the entire foot up to the ankle; swollen out of shape, and that intense burning incident to all cases of this character. Her foot gave such pain as to cause her to cry out in anguish, claiming that amputation was preferable to such suffering. I applied glyco-thymoline to every part of inflamed surface, then wrapped with an old linen cloth of four thicknesses that had been saturated in the solution of glycothymoline, bandaging all so as to exclude the air. Almost immediately a sensation of coolness, followed by a cessation of pain, was experienced, which continued, only a few more applications being necessary to effect a radical cure.

The last and most marvelous case was that of an unmarried lady, middle aged,

and a seamstress by occupation, troubled with hemorrhoids. The nodules were large and legion; were both external and internal, and aggravated at her menstrual period until she was confined to bed during these days. She had been operated upon sometime previously, but with only temporary relief. She had used nostrums without number, though none had given any ease. She was bitter on her "lot in life," as she termed the complaint, and had no faith in my treatment for it. She only called me for ease while in bed. I put her on tonic laxatives, and local applications of glyco-thymoline and hot water, equal parts. It acted like a charm, the throbbing pain got easier, the inflammation subsided, and she is, as she expresses it, entirely a new person. The treatment was ordered continued until satisfied its further use was unnecessary; also, to use the glyco-thymoline with two parts of water, injected into the bowel and retained. Her weight has increased, her complexion improved, and the once lugging step is now elastic. Not only does she tell that she is well, but every movement indicates hers a complete cure.

While the manufacturers do not claim more for it than an alkaline antiseptic, it is found to be a valuable remedy in the armamentarium of the physician and fills the place heretofore reserved for a number of favorite prescriptions. Being an alkaline antiseptic it covers a broad field in both medicine and surgery. It is deodorizing, anti-phlogistic, and agreeable, hence no objection to its administration. It favors resolution and fosters cell growth and thus materially aids in the repair of diseased tissue.

I have used glyco-thymoline in different strength from 25 per cent. to full, owing altogether to the condition of the patient and nature of the case.

We do not intend to convey the idea that glyco-thymoline is the only remedy used in our practice, but to show that it has been effective, and markedly so, in these, as well as other cases in which it has been used.

Rheumatism, (a) Etiology, (b) Pathology.

By A. A. Young, M. D., Newark, N. Y.

(a) The term rheumatism is a most convenient one for the physician to satisfy the curiosity of him for whom he is about to prescribe, and isolated, to the physician at the present day, the term means nothing; it expresses or conveys no definite idea of the conditions for which it stands.

To the ancients it meant more, it corresponded to their ideal etiology where something tangible, presumably some "little devil" had entered and taken possession of the body, producing a twinge here and a twinge there to remind the sufferer of life's frailty. To drive this "devil" out meant cure and required then villainous potations or disgusting incantations. The ancient idea may have been crude but it was prophetic of the future, a prophecy not yet fulfilled.

The "little devil" of yesterday will doubtless become the known specific micro-organism of to-morrow; the indicator points that way, and when that day shall come our etiological idea may be revolutionized. The conclusion has nearly, if not quite been reached, that there is a rheumatoid bacillus, but the *fully developed* rheumatoid bacillus is one thing and the *developing* bacillus, the manifestations of which are termed rheumatism, is quite another. A clear conception of the etiology of rheumatism can only be obtained from a correct knowledge of the biology of this specific bacillus. That these bacillæ infest the entire system in the active stage of the disease seems probable and reasonable, though their ocular manifestations may be confined to one single joint, it is safe to assert that the disease is a constitutional one, never local; the local manifestation probably marks the nidus of the fully developed bacillus, where it deposits its germinal vessicle which enters the system and completes another biological cycle, ending in the fully developed bacillus again. On no other assumption, it seems to me, can the ocular manifestations be explained which are so often bilateral and recurrent at quite definite and regular periods of time, though migratory in character. Facts warrant the assumption that rheumatism is the resultant of the entering and developing of a pathogenic organism within some menstrum or culture medium within the body; thus we are forced to the conclusion that rheumatism is an acute specific febrile affection induced by the presence and *growth* of the theoretical rheumatoid bacillus. This theory is strengthened by facts, a few of which may be mentioned. The disease progresses most rapidly in a climate moderately cool, but subject to sudden, frequent and marked changes, together with a moist soil and a moist atmosphere. It, too, has its seasons of activity and its seasons of quiescence, typical of the known diseases induced by pathogenic micro-organisms. The disease has an epidemology, has its periods of severity and its periods of mildness; attacks one organ to-day and another to-morrow; to-day it is virulent, to-morrow comparatively innocent; thus in a marked de-

gree it parallels other known infectious diseases which, without doubt, are the resultants of the development of their respective micro-organisms within the body which they have invaded. Heredity, too, has its bearing. It is a well-known fact that the children of rheumatic parents are more likely to contract rheumatism than are those whose ancestors have been comparatively free from it. If our hypothesis of the biology of bacteria be true, then the conclusion must be reached that the germinal vesicle of the bacillus is directly transmissible from parent, especially the mother, to the unborn child. It seems reasonable to assert that this germinal vessicle resides in and is transmissible through the blood stream of the mother from which the unborn child draws its life force and its sustenance. If the micro-organism itself be not directly transmissible, it leaves its imprint upon the child's inherited constitution; it reduces the child's resisting powers and makes the entrance of the bacillus far more easy, in later years, when climate changes are favorable to its development. Any condition producing enervation may be a predisposing element, but not the primal cause of rheumatism. The rheumatoid bacillus must first be deposited in the system in its entirety, or as a spore, and its processes of reproduction begun before rheumatism *as a disease* can exist at all. The etiology of this affection must therefore consist of a proper understanding of the *biology* of the rheumatoid bacillus, a knowledge yet to be acquired.

(b) The pathological changes which follow in the wake of developing rheumatoid bacillæ are numerous and confined primarily to the blood, secondarily to the joints, tendons and tendinous sheaths which become infiltrated in a greater or less degree with the products of inflammatory action, a peculiar type of inflammation, one in the wake of which suppuration or pus-formation is seldom if ever seen. That the blood stream is the medium which carries this morbific agent to the various parts of the body, where it sets up its peculiar inflammatory action, cannot be doubted. It is almost as equally certain that this morbific agent, a micro-organism, has its developing life within some constituent of the blood. for at its most early manifestations blood changes are found, the first of which may be mentioned is the increase of the fibrin producing agents, fibrinogen and fibrinoplastin, and their tendency to unite and coagulate even within the vitalized life blood itself.

The solubility and non-union of the fibrin producing elements are accomplished by maintaining an alkaline condition of the blood through the chemical influence of sodium carbonate and disodic phosphate. The tendency to coagulation increases in the same proportion as the blood loses its alkalinity. I am aware that the theory of an acid condition of the blood in rheumatism is questioned, a condition that favors the union of the fibrin-producing elements from which coagulation readily follows. Though the condition of the blood may not reach the point of acidity, it approaches it, and in this same ratio is increased the tendency of the fibrin elements to unite and form clots, which may be "Nature's protective policy;" this, however, is only a condition, a sequelæ of rheumatism, and not its cause; this condition indicates that there are marked and important changes in the blood itself due to some active and independent agency, whether such agency be bacteria or products of their growth. Another important change in the blood is a decrease, sometimes marked, of the number of red corpuscles; patients soon become anæmic, a condition brought about by the destruction of the corpuscles, or the prevention of their development within the organ or organs that produce them.

The former theory seems, however, the more plausible, since that other known micro-organisms have been found deposited within these corpuscles, and in a measure these micro-organisms are alike destructive of the functions and compositions of such invaded blood cells.

Though the blood, in a large majority of cases, if not in all, appears to be alkaline yet it is allowed that the amounts of urea and uric acid, in rheumatic patients, are considerably above the normal; while from some unknown cause they fail to unite, as is usual, with some of the alkaline elements within the same menstrum forming possibly harmless compounds by such union. It is my belief that the tendency to formation of fibrinous clots is the primary result of the uric acid diathesis which seems to exist in the rheumatic patient.

This infected condition of the blood also produces changes in the vascular system, especially the capillaries, and at times so weakens them as to allow the transudation of the red corpuscles through them, when ecchymotic spots appear indicative of a hemorrhagic diathesis, a diathesis the direct result of blood infection.

The changes of the urine seem more marked and positive, the urine becomes high colored, scanty, with a high specific gravity, it is markedly acid and on cooling deposits the amorphous urates and uric acid while there seems to have been but little if

any increase in the amount of urea formed. The relation existing normally, between these elements, has been distorted and this change takes place not within the bladder, the recepticle of the urine, not within the kidney, its eliminator, but is produced by abnormal tissue change dependent upon the development of the rheumatoid bacillus. The abnormal substances must therefore invade the blood stream producing systemic poisoning of which the fever is an index; it is one of the varieties of septicæmia and as such it must be treated. Nor must the tendency to joint involvment be overlooked, a condition which is likely to be produced, secondarily, from the primary blood infection. All of the tissues surrounding the joint attacked, is involved. The synovial fluid is poured forth in greater abundance from the over-stimulated membranes bathing the entire joint, inclusive of the tendons and tendinous sheaths, with a superabundance of fluid, but a fluid which has changed its alkalinity for one of acidity which fact indicates blood change. Neither is it probable that this acidity is the direct cause of inflammatory action which soon follows. The synovial fluid poured forth in such abundance is doubtless a remedial agent, not alone lubricating the joints but serving to cover up the fully developed bacillæ which have invaded and make such joint their home and from which their offspring may complete another cycle when liberated by some agency. This theory seems to be borne out by the fact of the great tendency to periodicity of rheumatism, not as new attack, but as recurrence of the old one.

The membranes and tissues in and about the invaded joints assume greater vascularity and thickening.

The articular surfaces become somewhat roughened from an increase of the cartilagenous cells, which increase frequently produces joint distortion from the large amount of deposit due to inflammatory action. Inflammation as is well known, is nature's way of eliminating foreign material; with the products of inflammation, when elimination is impossible, she covers up and imprisons within their nidus the fully developed rheumatoid bacillæ, thus if not destroying them, prevents in a measure, further re-productive processes. The occular manifestations therefore, which we term pathological conditions, are but the sequelæ of germ development and nature's effort in their elimination. Conditions point to causes only and the rational treatment must consist in the elimination of the cause.

22 East Miller Street.

Medicine.

By H. Plummer, M. D , Harrodsburg, Ky.

Medicine is, and has been, a necessity since Adam delved and Eve spun. It is recognized as an art for the prevention, cure and alleviation of the ills to which flesh is heir, and as a science it should form a part of the common law of the land, and respected as such. But when this devoutly wished for recognition shall seize and fully possess the political economists, who sit in high places at the Capital of the nation—whether it be the next week, or the next year, or whether it shall be postponed till chaos comes again, we cannot divine. The profession is a unit in the belief that the Creation of a Department of Public Health, clothed with plenary powers and prerogatives, would be the most beneficent and forceful thing which could happen the American people.

Thus would the cause of the people be fully espoused; protection ensured against preventable diseases; money would be saved, which is money made, and the profession of medicine placed in that category to which it is entitled, and accepted as a science and beneficence—an *evangalistic agency*.

It is as plain as the nose of Cyrano de Bergerac that "public safety is dependent on the public health, and public health on capable and conscientious physicians." Without the one there cannot be the other. They are mutually dependent. The difficulty, we opine, has been, and is now, to make the average legislator cognizant of his duty, and to recognize the fact that good would come, the laws faithfully executed with a competent medical man at the head of affairs, and that a boon, greater than ever would be conferred upon mankind during the conspicuous progressive century drawing to a close. But up to date the idea hasn't been digested by our Solons. What a blessing is digestion! To have it the sun is always shining and the shade always ready for you! Would we had the dexterity to perform the miracle, courteously would we bestow this benefaction; but it seems the law-makers cannot divest themselves from the "traveled thoroughfare by paths leading to unfamiliar pastures." There is too much Johnston! The profession is upon science and art, but is not familiar with medical politics, nor able to cozen the powers that be. However, it is in comfortable convalescence, with its lights as well as its shadows, nor shall it be frigeteened away from its efforts in securing a Health Department as was Peter Pinder from his

profession by the clinking of his bell-metal pestle and mortar.

"Appendicitis."

By J. H. Van Eman, M. D., Kansas City, Mo., Professor Diseases of Women, Kansas City Medical College; Member American Medical Association, etc., etc., etc.

Gray says that, "The appendix vermiformis is a long narrow worm shaped tube, the rudiment of the lengthened cæcum found in all the mammalia except the orang outang and the wombat." Whether it is a compound of adenoid tissue, or is simply a tube covered more or less completely by peritoneum containing a middle coat of circular and longitudinal fibres with a sphincter at its proximal end and lined by a mucous membrane well supplied with mucous glands does not concern us in this paper. What we do most certainly know is that it is the source of much trouble and anxiety, not only to its unfortunate possessor when it becomes inflamed, but to the doctor in charge as well. In size, it is about that of an ordinary lead pencil; in length, from two to seven inches, most frequently a little less than three; in direction, it may lie with its pointed end to every possible point of the compass even extending across the brim of the pelvis into the right illiac fossa. Its peritoneal covering varies greatly, sometimes extending but a short distance from its base and again covering in even its apex. Its blood supply is derived from a single rather small artery within the folds of its mesentery. The canal is small and in a very large proportion the point, where it empties into the cæcum, is the most contracted portion.

In health, so far as it is known, it contains an amount of mucous simply sufficient to hold its sides apart and act as a lubricant. For clinical purposes all that portion of the large intestines below the illeo-cæcal valve should be taken into consideration. The longitudinal band coming down the colon and cæcum ends somewhat abruptly at the base of the appendix and is the guide in finding it in operative work.

Considering the cæcum and appendix as a whole we find it then only partially covered by peritoneum, the cæcum usually lying in the venter of the illium upon the psoas muscle, and is connected more or less firmly to it by rather loose connective tissue, thus giving the part considerable mobility. This provision enables the cæcum and appendix, as it were, to slide out of the way when by reason of a fixed abdominal wall and a simultaneous contraction of the psoas and illiacus internus muscles, it might sustain damaging pressure.

We have the testimony of Dr. Byron Robinson, of Chicago, and many others, that circumscribed peritonitis is an unusually frequent disease, also that the corner, so to speak, occupied by the cæcum and appendix is by a goodly percentage the most frequent site of this inflammatory condition. Statistics show that fully two-thirds of the cases of appendicular inflammation occur in males. This is, I think, a result of the increased development of the psoas and illiacus muscles in the male and their more active use, and the greater exposure to blows and other traumatisms in that region. I shall not go further into the etiology at this time. Speaking clinically, as before, I divide appendicitis in three classes or types:

Catarrhal—Acute and Chronic.

Purulent Encysted—Without perforation and with perforation.

Purulent Perforated—Without cyst.

In the catarrhal form we have as a result of irritation of some kind, an increased flow of blood to the appendix, and as a result of this, increased glandular activity, owing to the small caliber of the appendix, it becomes over distended, and as a result there is muscular contraction with pain, which continues until the appendix is emptied, this has aptly been called appendicular colic. The irritation continuing, we have as a second result, not a purulent inflammation, there being as yet no solution of continuity permitting the entrance of pus producing germs, but an exudate within the muscular walls and extending through and involving the peritoneum. With the organization of this plastic exudate, we have a greatly thickened appendix, and find it firmly bound down to the surrounding tissues. This process may go on, i. e., exudation and organization, until the lumin of the tube is obliterated, thus effecting a cure. This might be called the medical form, as in a very large majority of cases this form of appendicitis can be cured by rest in bed, under opium after the bowels have been thoroughly evacuated. This class of cases which require surgical treatment are those which by their recurrence are very apt to sooner or later, by some solution of continuity, become purulent, or in which from the great amount of thickening, or the firmness and locality of the adhesions, produce an evident tumor, giving pain and interfering more or less with the patient's avocation.

The symptoms in the acute catarrhal form are pain, slight swelling in region of appendix, little or no hardness of the abdominal muscles, constipation, but little fever,

or hurry of the pulse. In other words, there is so little constitutional disturbance that the condition is not grave. The best time for operation, when required in this class of cases, is after the subsidence of the acute attack. In all other types there is solution of continuity or at least a structural degeneration sufficient to permit the entrance into the tissues of pyogenic germs and a proliferation of pus and an inflammatory condition begins its course, advancing in many cases to tissue destruction, rupture into the abdominal cavity, and general purulent peritonitis with a rapidity both amazing and deadly. In this type I believe an operation is always called for and the sooner after the diagnosis is made the better.

Whether this variety of pelvic peritonitis takes a fairly favorable or a most unfavorably fatal course depends on several factors which we will now consider. First, comes the peritoneal investment of the appendix, the more thoroughly complete its mesentery, the less danger of rupture into the peritoneal sac. An appendix lying on the upper and outerside of the cæcum is so far as position is concerned most favorable, curled up directly in front comes next, lying down along the inner border of the psoas and pointing into the pelvis third, and fourthly pointing upward and inward the worst. The extent and mobility of the omentum is of great value in determining the favorable course of an appendicitis. I have seen the omentum forming the inner wall of an appendicular abscess too often to believe it an accidental condition. I believe it stands like a faithful sentinel and rushes to defend the point of danger.

A pulse of 115 to 120, a temperature of 101 to 102, (some deadly cases have a lower or even sub-normal temperature), an anxious countenance, a tense abdomen on the right side with the thigh flexed, continuous pain and most marked tenderness at McBurney's point, with a well marked oval swelling in the right inguinal region, with or without constipated bowels clearly indicates an encysted purulent appendicitis, either with or without rupture of the appendix. This you will not be able to tell until after the operation, but one thing you may be sure of and that is that the case is one for prompt surgical interference.

In the last class of cases, when by rapidity of ulceration and perforation there is an escape of the contents of the appendix directly into the peritoneal cavity in the very beginning of the attack, no tumor can be felt, the whole belly is hard and resisting, and all the deadly constitutional symptoms mentioned above and particularly a feeble and rapid pulse with cold extremities are increased an hundred fold. The surgeon might well stand appalled at the task before him, and hesitate if it were better to let the sufferer die in peace or make the attempt to save him with nearly absolute certainty of failure.

In an amputation we know almost precisely every step of the operation before us; in the operation for appendicitis we may have an operation almost as simple as opening an abscess on the one hand, on the other one of the most delicate and difficult of celiotomies. This to a certain extent will be illustrated in a number of cases which I now have the honor to report. These cases I will not report in exactly their chronological order.

Case 1.—On the 31st day of March, 1895, I was called to see L. C., a boy of fifteen, crippled in his left leg from childhood by infantile paralysis. I found him with tense and tender abdomen, both knees drawn up, rapid pulse, and a decided rise of temperature. His abdomen was so sensitive I was unable to make out any tumor; his father had been trying to get his bowels moved for four days and had failed completely. By the use of enemas and small doses of calomel frequently repeated, I succeeded in three or four days in thoroughly evacuating the bowels. His tympanites gradually disappeared, but the pain, quick pulse, and fever, held on day after day, the tenderness was not at McBurney's point, but with the pain extended across the lower part of the abdomen. About April 20th, a tumor began to show itself in the left inguinal region over the outerside of the lower third of the sigmond flexure. On April 24th I cut down on the most prominent part of this swelling and found that it laid behind the gut which was bound down to it by strong adhesions. By blunt dissection I worked my way downward and backward on the outerside of the gut and was at last rewarded by a jet of stinking pus. I was able to pass a quite large drainage tube clear across the pelvis for a distance of seven inches. The temperature and pulse went down in a few days and his recovery though slow was uneventful.

Case 2.—J. J., age 42. Three attacks inside of two years—last one six weeks before operation—found a sausage-like tumor beginning just below McBurney's point and extending to the brim of the pelvis. Section made, no pus found, adhesions broken up, appendix ligated and removed, wound closed without drainage. Patient returned to his home in three weeks cured.

Case 3.—March 24th, 1898, 11:30 P. M., I received a telephone message to call to see a young man, who had been sick for

two days. This message was from the attending physician, who reported the case as an appendicitis, and gave it as his opinion that operation should be made at once. On reaching the patient an hour later I found him in bed with his right knee drawn up, pulse 120, temperature 103. Bowels had been thoroughly cleaned out. Pain was not great, as he had been given a dose of morphine an hour before to quiet pain.

History.—Age 24, single, book-keeper. No previous attacks. Two and one-half days previously had been awakened in the morning about four o'clock by an intense pain in the illeo-cecal region. This pain, while moderated by opium and hot applications, still continued, but there was no rise of temperature for more than 24 hours. I found besides the dawn-up knee a hardness of the muscles and tendons in the right inguinal region and also a small firm enlargement on the level but to the right of McBurney's point. As the lights were decidedly poor and the case did not seem urgent, I decided to defer the operation until daylight. At 8:30 A. M., March 25th, the patient was anesthetized, placed on an improvised table, and after the usual cleaning up, an incision three and one-half inches long was made over the most prominent part of the tumor and rather nearer than usual to the illium. After getting down to the muscular layers, they were separated as much as possible rather than cut. On getting down to the cæcum, I found no adhesion between its anterior surface and the anterior abdominal walls. After carefully walling off the general peritoneal cavity with iodoform gauze, I continued my dissection, finding the mass lying to the right and behind the lower end of the colon. I was compelled to lift the cæcum outside of the abdominal wall. I found the appendix (unusually short) imbedded in an exudation mass containing pus, with a marked fecal odor. The quantity of pus was not great, but its odor was unpleasant to say the least. After cleaning out the wound as thoroughly as possible, the appendix was brought up, ligated with silk, cut off, cauterized and dropped back, the ligature being left long and its end brought out through the wound, A double rubber drainage tube was introduced, the upper half of the incision closed by deep interrupted sutures, gauze packed around the tube, and gauze cotton and gauze dressings applied and a retention bandage over all. The temperature remained above normal for three days, going down gradually. The ligature on the stump came away on the fourth day and convalescence was without an interruption, and he returned to his home in Ohio at the end of four weeks. The only thing in this case different from others reported is in the management of the pedicle.

Case 4.—September 30th, 1898, 9 P. M., was called to see F. D., a delicate looking boy of seven years and received the following history. Three days before I was called he ate very freely of green walnuts, that night he was sick at the stomach, had quite a fever, and severe colicky pain in his bowels. His stools contained quite an amount of undigested walnut. As his bad symptoms still continued, they sent for me. Found him lying partly turned to the right side, right knee drawn up, belly tender and tense, tenderness most marked over McBurney's point, some increase in tension but no perceptible tumor, pulse 130, temperature 102, total loss of appetite, and much nausea. Informed his friends as to the nature of the case and that an operation would most likely be necessary. October 1st., no marked change unless an increase in the abdominal tension. October 2nd, A. M., under anæsthesia could make out decided fullness extending from the base of the cæcum well down to the pelvic brim, but would hardly be justified in calling it a distinct tumor.

On making section found no adhesions between the cæcum and the abdominal wall. A coil of the illeum lay directly in front of the cæcum. The peritoneal cavity was carefully walled off with iodoform gauze. Working my way downward along the border of the psoas muscle, I found an abscess containing not more than two drachms of pus; this was carefully removed, a double rubber drainage tube put to the bottom of the cavity and in the lower angle of the wound. Three interrupted through and through silk worm gut sutures were used to close the upper angle; gauze was packed around the drainage tube and outer dressings in the usual way, appendix not sought for.

His fever kept up for four or five days; suppuration was very free. He was not allowed to sit up for three weeks and was a little later dismissed well.

Case 5.—J. H., age 15, a long legged boy of very active habits got a new wheel about the 1st of October. On this he rode many hours at times at a high speed. From history he evidently had suffered with an attack of appendicular colic some six or eight months since. On the night of the 5th, he had severe pain, after purgation he felt better. On the evening of the 6th, he was quite sick with pain and fever. This continued with more or less severity until the morning of the 8th. During the previous day he vomited frequently. When I saw him in consultation with Dr. Hanawalt

on the morning of the 8th at 10 A. M., he was comparatively comfortable. Pulse 110, temperature 102, bowels thoroughly empty, belly tense on right side and very sensitive in the illeo-cæcal region. At a point above and to the inner side of McBurney's point, an oval tumor not larger than a small hen egg could very easily be made out. An operation was very earnestly advised but owing to the prejudices of the friends against the knife, consent could not be gotten. About 1 P. M., he had a violent and prolonged spell of vomiting during which I received a message saying I might operate as soon as I wished. Made section at 5 P. M. No adhesions around or below cæcum; appendix turned up over lower end of colon and adherent to inner border of abscess wall formed by omentum. From about the center of a greatly thickened and inflammed appendix, a concretion the size of a navy bean had escaped and was lying loose in the abscess cavity which contained about one-half an ounce of pus. Cleaned up and dressed as usual; convalescence uneventful; cured.

Technique.—It goes without saying that asepsis should be as thorough as in any other abdominal work. The incision through the skin and subcutaneous tissue should be made with its center near McBurney's point and if any difference a little to the outside of the long axis of the swelling and parallel to it. It should be about two and one-half inches long in the beginning and its length may be increased either at the lower or upper angle as the exigencies of the case may demand. So far as may be possible, the different layers of muscles should be separated in the line of their muscular fasciculi rather than cut. In young subjects with thin abdominal walls this will be found most difficult.

On getting down to the peritoneum, darkened and hyperemic from inflammation, we run across the first difficulty, viz: to say whether the tissues directly beneath the knife is thickened and inflamed transversalis fascia or whether we have gone through the abdominal peritoneum and the part we see is the gut itself. If we pinch up with a thumb forcep, a portion of the tissue in the bottom of the wound if it is gut, a slight peristalsis will be set up; if it is not gut no movement will be elicited. If we are down to the wall of an abscess there is something in the resciliency of the mass that cannot be expressed in words that tells the story to the practiced touch. Catch up a portion of the tissue between two pair of thumb forceps careful nick between and if you are into the abscess cavity a jet of pus will be thrown out forcibly, usually very offensive in odor. The opening should be carefully enlarged in order that it may be drained, any secondary deposits should be found and the whole cavity drained out and kept drained with gauze or rubber tubes or both.

No anxious or persistent effort in this kind of case, viz, with large abscess, should be made to find and remove the appendix; very little good, but an infinite amount of harm may be caused by such procedure. In quite a large proportion of the cases requiring operation the abscess cavity, owing to its size, locality, and surroundings, will not be opened into but the peritoneal cavity instead. When this occurs, as it has with me in fully fifty per cent. of my cases, I carefully wall off the wound from the abdominal cavity by pushing in all around strips of iodoform gauze two or three inches wide and sixteen in length. I then seek out the abscess, separate adhesions and get up and bring out the appendix ligating it close up to the cæcum with cat-gut or silk. If with silk, leaving one end of the ligature long and bringing it out of the wound. After cleaning out the wound, I close the upper angle one-half or more of the wound with two or three deep through and through sutures of silk worm gut.

If the edges unite as they generally do, much is gained; if they do not, nothing is lost. Introducing a soft rubber drainage tube in the lower angle, gauze is packed well around it with plenty of gauze and cotton over dressings and a retention bandage over all. Dressings should be removed as soon and as often as soiled. Gauze and tubes for draining should begin to be taken away by the third day, and should all be out by the end of the first week. The patient should not be permitted to get out of bed or stand on his feet in ordinarily severe cases before the twenty-sixth to the thirtieth day.

After Care.—By "after care," I mean medicinal, dietetic and hygienic treatment from the moment the patient is returned to his bed until full convalescence.

The bed should be ready to receive the patient, an oil cloth having been placed directly under the sheet for cleanliness, and hot water bags or bottles so arranged as to thoroughly warm bed and patient's extremities, but not burning him in the least. Put patient in bed keeping head low so as not to make too much work for the heart. Cover him well and keep absolutely quiet, allowing none but attending nurse in the room. In case the heart action is weak, rapid and thready, administer strychnia 1-20 to 1-40 hypodermically according to age of patient, to which may be added 1-100 nitroglycerine and 1-150 atropia if required. No

morphine should be given owing to its effect on the bowels and if an opiate is absolutely necessary, the sulphate of codea is preferable.

The pulse should be carefully watched and strychnia given when indicated. This should be energeticallly pushed if heart failure is evident. It is time and labor lost to give 1-60 grain doses of strychnia every four to six hours. To an adult give 1-20 and even 1-15 grain every half hour until the physiological action is shown by some tetanoid movement after which it should be stopped for four hours—occasional doses of nitro-glycerine (1-100) and atrophia(1-150) can be added. Whiskey and digitalis may be given hypodermically, also in urgent need, with heat to the extremities. In fact, heroic measures are sometimes required and one should not hesitate when there is everything to gain and so little to lose.

In average cases, however, this will not be necessary, and 1-40 strychnia every four to six hours will be all that is required and often not even this.

For the vomiting, which nearly always follows the anesthetic, there is nothing required as a rule except absolute quiet and abstention from all fluids and food for twelve to fourteen hours. This sometimes gives little or no trouble and then again it becomes a serious problem in itself, and may require some attention, in which case the various remedies can be tried—calomel and soda in small doses—dry on tongue every half hour. Bismuth, champagne, etc. Usually this is not required.

Upon return of consciousness the patient's first request is "water," and this increasing thirst makes our first twelve hours very trying to the patient and the nurse as well. Above all things withhold all fluids until all nausea and vomiting is over. In eight hours, providing no nausea or vomiting is present, water (hot water at first) may be given, beginning with teaspoonful doses and repeating in fifteen minutes if no nausea is provoked, after which the amount can be gradually increased and cold water given instead of hot.

Very soon after the operation, an enema of one quart normal salt solution should be thrown well up in the bowel and to that may be added a small quantity of strong beef juice. This should be repeated in four to six hours and again if necessary. This will alleviate the thirst to some extent and also feed the patient.

Crushed ice is advised by some, but I think the effect of the intense cold on the mucous membrane more harmful than beneficial.

During the twelve hours following the operation we must not forget the kidneys, and if after twelve or eighteen hours they have not acted, the bladder must be catheterized. The patient should always empty his bladder just before going on the operation table. In case the bladder is found empty, a diuretic must be given, this being done per rectum, using either the infusion of digatalis, sweet spirits of nitre or one of the other diuretics. Usually no such active measures are necessary.

Now, in eighteen to twenty-four hours after operation, providing the patient's stomach has become thoroughly settled, must come up the question of nourishment. For this we have nothing better than milk which should be given in small quantities at regular intervals, usually every four hours. If a tablespoonful of plain or lime water be added to each teacupful of milk, the tendency to hard coagula in the alimentary canal will be reduced to almost nothing. Buttermilk is very refreshing to many patients and will give plenty of nourishment. Egg albumen and water is also another form of food which can be given. Beef broth or tea also another. This all must be carefully given and results watched, and the patient must have just as much as he will digest and assimilate properly.

On the evening of the second day calomel should be given either in one mass dose of two to four grains or in smaller doses of 1-4 grain every hour for six to eight doses —this being followed in the morning by a saline unless the calomel has acted thoroughly. Now, on the morning of the third day if bowels have acted and kidneys are acting freely, and pulse not over 100, with fair or good character, we may consider the patient almost safe even though we still have a little rise of temperature.

Our feeding must be carefully attended to gradually increasing quantity at each feeding, and lengthening intervals between same, also gradually getting on to more and more solid food. Bowels must be kept open, moving at least once daily by some mild cathartic always choosing the one most agreeable to the patient.

If appetite lags and tongue remains coated with a whitish and offensive coat, a combination of dilute hydrochloric acid, bi-chloride of mercury, and Fairchild's essence of pepsin will clean off tongue and act also as a tonic.

A chill or repeated chills with high temperature, tense and tympanitic abdomen,and thready rapid pulse denotes septic petitonitis and should be treated heroically with opium and cardiac stimulants, having first cleaned out bowels thoroughly.

The surgical care of the wound has been

discussed, but I will further add that in case our granulations are too active, preventing the formation of epidermis and puffing up above the surface, Monsels powder or the sub-sulphate of iron dusted over the surface of the granulation will in a short time check the excessive growth and clean it away, allowing the skin to form perfectly. The patient should be kept in bed for three weeks at least and longer in some cases. Too early getting out means ventral hernia in too many cases.

In closing I will say that careful attention should be given at all times to every detail, and we must be constantly on the alert for abnormal conditions and anticipate them when we can, and with this attention I can see no reason why we cannot discharge a very large percentage of our patients perfectly cured.

Hemorrhoids.

By H. L. Appleton, M. D., Cedar Bluff, Ala.

In presenting this article on hemorrhoids. or piles, I do not do so with the expectation of advancing anything new, for it is a subject that has received a degree of its share from all sides. The surgeon has paid his respects, the specialist has spent his opinion. Hemorrhoids is not a disease, it is only a condition brought about by causes produced in other parts of the body, and is purely a local trouble, and should be regarded as such in the treatment. It is a trouble that is not effected by social conditions or personal hygiene. We find it among all classes, from the peasant to the crown; from the black mammy on the sugar plantations to the mothers of the noble sons of great Americans. It has heretofore been left to the surgeon to treat, and is considered in the surgeon's line by the general practitioner. There is nothing that confronts the general practitioner so often as this one trouble. Then why not study the cause and seek to remove it? This done and the battle is half over. It is not my intention to eject all the profits and pleasures from the specialist of this organ and place them in the hands of the general practitioner; for there are two classes of cases; surgical and non-surgical, or cases that yield to treatment, while others have to be operated upon; therefore I will devote my time to the non-surgical cases, or cases that are amenable to medicinal treatment, and to do this it will be necessary to take up the blood supply of the parts. The hemorrhoidal veins distributed to the lower part of the rectum are very liable to become dilated and varicosed, giving rise to a condition called piles or hemorrhoids. When the plexus beneath the mucous membrane within the external sphincter is thus affected, the pile is said to be internal. When the veins beneath the integument outside the muscles are enlarged they are external. We may have the two conditions in the same person at the same time. External piles are of two kinds; first, a sanguineous tumor; second, a cutaneous excrescence, or outgrowth. The sanguineous tumor consists of a softish elevation of the skin near the margin of the anus, and is of a roundish form, slightly of a blue tinge. On cutting it we find a dark colored coagulum inclosed in a sac or cyst. The cutaneous or excrescence form of external piles consists of a flattened prolongation of the skin due to the hypertrophied condition of the epidermis pappaliea and cutaneous layers. Internal piles always precedes external piles, sometimes without the patient's knowledge; as external piles is generally due to the first form of a projecting fold left after absorption of the coagulum, having undergone further growth. Some cases only have a broad flat excrescence at the side of the anus, while others have two on each side. In some rare cases we may have them encircling the entire anus; we only have the last named condition in irritating discharges, stricture or ulceration of the part. Internal piles seldom attract attention until they advance so far as to protrude when at stool. They then exhibit a remarkable diversity of appearances, according to number, size and condition. The protrusion may consist only of one large tumor, or it may consist of two, three or four, but if only one protrude it will be near the perineum and is always the case with women. In old cases they are apt to be more numerous.

The aspect of a pile depends much upon the condition, whether congested, inflamed or constricted by the sphincter.

ÆTIOLOGY.

Hemorrhoids are a condition of middle and advanced age; they rarely ever occur before puberty, and few people, in after life escape them; altogether, they are mostly found among patients of sedentary habits. Piles, though a common condition to both sexes, occur most frequently in males.

TREATMENT.

This is the important part, the one the sufferer, as well as the doctor, is mostly interested in. When piles are in the incipient stage and cause but little pain or inconvenience, the treatment is very simple: they can be cured by taking all the outdoor exercise possible, sitting as little as possible on soft or cushioned chairs as can be well

avoided; attending to the bowels, by avoiding constipation, and abstaining from all drinks, such as wines, beers. whiskeys, &c. Many never suffer from piles only after coming off of a spree of drunkenness.

My mode of treatment, in all cases where surgical interference is not required, is to see to the bowels, they must be kept free and open; for this purpose, I prefer Epsom's salts in large quantities in a fresh glass of well water on rising in the morning. I caution my patient about diet and habits. I have the patient eat regular of such foods as have a tendency to increase the peristalic action of the bowels. I find the fruits and vegetables best adapted for this. Then as a local application, with a hard rubber syringe, that will hold about two ounces, with a nozzle about one and a half inches long, I inject, with a gentle pressure, glyco-thymoline one drachm, water one drachm, three times a day and on retiring, in Simm's position. I prefer Kress' preparation of glyco-thymoline as it has given the best satisfaction in my hands. I have never found a case of itching or bleeding internal piles that this mode of treatment has not relieved in forty-eight hours.

Where the bowels are sluggish and salts do not relieve, I use an ænema of bi-carbonate of soda one tablespoonful in a quart of warm water with a teaspoonful of glyco-thymoline, have patient retain this as long as possible, after it passes off, then apply the treatment as above indicated.

Remarkable Case.

By F. O. Hawley, M. D., Charlotte, N. C.

On a recent visit to Marshville, Union county, N. C., I met with a colored woman, Leanna Kearlock, who is the mother of 23 children, the youngest now one year old. She never had twins—all single births—and says she was grown before the late civil war, and carried her pass, which, of course, would make her near on to 60 years old. She weighs 99 pounds; small but quick motioned and smart; a washer woman who it is said does more and better washing than any one else in that thriving town on the S. A. L., and is said to have given birth to three children within eighteen months. She told me she would not be satisfied until she had 25 children, and that she is as regular now as at any time in her life at her menstrual periods.

Now the proposition is how many children can a woman have, and all single births? How old must she get before she stops menstruating.

Some of our good women, who have been looking forward to 45 years, hoping that all danger to become pregnant would then cease, can stop and sigh.

A good joke is told of this negro, viz.: Some time since there was an epidemic of measles in the neighborhood, and on being asked if any of her family were sick said: "Yes, 19 or 20 of the children are down with measles, and I don't know whether the rest will take it or not."

26 West Trade Street.

What to Do with Strangulated Hernia.†

By Clinton B. Herrick, M. D., of Troy, N. Y., Lecturer on Clinical Surgery, Albany Medical College; Attending Surgeon to Troy Hospital and House of Good Shepherd: Consulting Surgeon, Leonard Hospital; Surgeon to D. & H. & Fitchburg R. R.

Before entering directly into the discussion of the remedies and means used in the treatment of strangulated hernia, I deem it wise to call your attention afresh to a few of the anatomical relations of the parts concerned, as well as the condition in general. A loop of intestine, a vital structure, is forced out of its normal cavity through an opening, called the inguinal ring, into a canal, the inguinal canal. The ring, or opening through which it passes, is circular, or nearly so, and its borders are formed of stout muscular and fibrous bands, quite resistant and unyielding, while the inguinal canal is pouch-shaped, its walls elastic and soft, capable of distension. The intestine, crowded to its utmost, and squeezed into small bulk in passing through the definitely formed opening, finds freedom in the canal to unfold itself and to occupy more space, becomes more bulky, thus rendering its return through the opening not liable to occur of itself. But an irritation or other influence added to this bulk, has caused the muscular ring to contract upon the intestine to a degree of constriction absolutely shutting off the canal, and restricting its contents from being returned to its normal cavity for the time being, if not permanently, if unassisted. Now the effect of this strangulation is immediate and pronounced, both locally and generally, depending somewhat upon the exact nature and degree of the constricting band, and the contents of the canal at the time. Aside from pain and local disturbance, as swell-

†A paper read as a part of the discussion on Strangulated Hernia before the Union Medical Society of New York, Vermont and Massachusetts.

ing and tenderness, the sudden closure of the intestinal canal and the cessation of the flow of its contents is followed by constitutional symptoms varying in degree, but severe, and ever growing more severe. Vomiting and collapse follow, and eventually death. The continuance of constriction at the ring causes venous congestion in the extruded part, followed by exudation and swelling of the walls of the intestine, which will go on to inflammation or to perforation, or to gangrene of the entire extruded portion.

Now the severity of this condition has been recognized for ages, and while many remedies have been suggested and advised by many, yet delay in attending to the matter of relief has always been urged as dangerous. Every strangulated hernia, if not relieved in a variable, but always brief period, will almost inevitably cause the death of the patient.

While this has been the accepted belief for years and it has been known that the operation of herniotomy, or the division of the constricting band by the knife would be radical in relieving the condition, yet some conditions and circumstances warrant, at times, the use of other measures in the first instance. Formerly, in the light of the fact that the operation was considered serious, it was in the list of "dernier ressorts," at present the measure, as a measure, is not considered more than a minor operation in its performance, *per se*, yet a wound is a wound, and not to be desired when easily avoided, in any condition. In applying any remedy short of this radical operation, some time has to be taken, and consideration must be given this thought in order to establish where and when such delay, no matter how slight, can be afforded. Firstly, the nature of the hernia influences the condition of severity to a considerable degree. If an acute hernia, or one never before present, becomes strangulated, or upon being so any hernia assumes an inflamed condition, hot, painful, tender, and all the constitutional symptoms prominent and severe, any delay of more than a few minutes is inexcusable, and such a patient's bedside should not be left by the attending physician without the return of the hernia to the belly be accomplished. In the hernias of long standing, where, through a poor truss, or otherwise, a mass rather large and soft comes down, the local and general symptoms slight and not progressive, then delay can be entertained for some longer time, while the various measures to be advised are being used for the reduction of the mass. Then in the old, large hernias, with large openings, rarely tightly constricted, but frequently irreducible at first instance, with no more effect upon the individual than the inability to put back what they have always been able to do, are such cases that need not worry one for the first few hours, while instituting the various remedies and procedures short of operation. Then, too, the contents of the hernia, whether all intestine or whether there be included with the loop of intestine a mass of omentum, or it be entirely of omentum. The presence of the latter acts to protect the more vital intestine, and so mitigates the severity of the local and general conditions, to the end of permitting more delay before the danger line is reached.

Then to the remedies: Ages ago, venesection, powerful purgatives, infusion of tobacco, emetics, and opium, were the general remedies, with leeches, and hot water, as the local. Then came the practice of a general hot bath continued to the point of prostration, that the relaxation of the ring might occcur spontaneously. This has been advocated even in latter days. Then the hypodermic injection of morphia in the neighborhood of the ring, under the supposition that it would relieve the spasm: and that of atropia, thinking that would cause the ring to dilate, were measures of advice. Then there were those who thought that by aspiration of the intestine to withdraw the gas or fluid therein contained, or even to remove whatever solid or semi-solid matter there, would reduce the size of the mass to a reducible one. Next came apparatuses of all sorts, mostly pads, or cots to fit over the tumor with equal pressure held in place by an elastic belt encircling the body. Later, ideas went from hot to cold applications, and cold water, cracked ice and ice water was poured upon, and ether and freezing mixtures of ammonia or other salts was dropped upon, or trickled upon, the tumor or its neck, with the idea of thus overcoming the spasm thought there to exist as a cause of the strangulation. Large enemata to bring on an increased peristalsis, and to empty the lower bowel, was another remedy advised. A posture of the body tending to relax the abdominal and other muscles of the region by flexing the legs upon the abdomen, and by raising the entire hips and lower extremities is, and has been advised, usually in conjunction with many of the above mentioned remedies, believing that by gravity acting upon the abdominal contents, a drawing inwards of the extruded parts would accomplish itself at the moment the spasm let up.

From the middle ages down to the present, after dilating upon the various remedies advised by the observers of their times,

all authors agree in advising taxis, as the next procedure, and the one most frequently necessary to be applied in every case, giving it as the performance "par excellence," and the last, short of operation. Now it may be said right here that no man gets to a case of strangulated hernia but what he at once attempts to relieve the same by manipulation or taxis. Whether it is best to always do so, or not, will be discussed later on, but if he finds a resistance to the return of the mass by an ordinary amount of this procedure, he then adopts either one of two plans: He decides to operate at once, or he decides that he will try one or another of the remedies for a time and then taxis again before proceeding further, and he bases his lines for such treatment upon the history, kind of tumor, amount of disturbance, local and general, age and other conditions which have been noted as influencing the matter of justifiable delay.

In case the latter plan is to be carried out, what shall we advise him to use, and in what cases? Setting aside as obsolete, and only appearing as history, the use of venesection, purgatives, emetics, apparatuses, depressants, and other too vigorous and dangerous remedies, we come to the hot bath. This is applicable to those cases occurring in robust persons suffering with acute hernias, the posture with elevation of the hips, to be followed directly thereafter. Cold applications locally, and anodynes internally are very rational remedies upon which to put our reliance. I have heard my preceptor tell of many cases of hernia that reduced themselves in front of his eyes, by pouring from a pitcher, ice cold water directly upon the tumor. I have seen hernias myself that at first instance seemed positively fixed, yet gave way upon gentle pressure, after having been covered by an ice bag for an hour or two. Thus teaspoonful applications of ether frequently made, or the application of refrigerant mixtures, are attended with benefit. Now, no matter what remedy is employed, we can hardly expect the mass to return without any assistance whatever, so a gentle pressure of taxis must be made at intervals during the application of any of these methods, combined with the elevation of the hips and lower extremities. As to the adaptation of any treatment short of full taxis, or operation, we may say that in the acute or inflamed hernia no time is to be lost by using any of these methods for more than fifteen minutes to a half hour. If no relaxation occurs after that time with cold applications, and a full hypodermic dose of morphine, proceed further at once. In the next class of cases no urgency is demanded, and a day or a night might be safely passed in adopting any of the measures advocated, provided a close watch be given the case for further symptoms. In this particular let me remark that in the aged we must admit that destructive processes are prone to make their way without much advance in the general symptoms of prostration or collapse, so we must not let these cases get the better of us in thus masking the real state of affairs.

Then as to taxis: As we have said, this procedure is usually taken up first in every case, and that there is a proper way to do it is dilated upon by the page in every text book. Knowing that there is an infolding or a duplicature of the intestine, and its walls, and that a fold is liable to be right in the very ring, the first attempt is that of a drawing down, as if to extrude more of the intestine, but rather to tend to unfold the duplicature, then with firm, gentle uniform pressure upon the entire mass by the hand in the direction of the opening, the fingers are at work close to the borders of the ring in the endeavor to replace that part which has been the last to descend, and which is engaged directly in the ring. With the legs flexed and the hips elevated upon a hard pillow, a gentle kneading is practiced upon the tumor in efforts to reduce the same, and this is usually kept up constantly for a matter of a few moment, when a respite is exercised. Some tumors are very sensitive, some patients are nervous and without "grit," and some, yes many, tumors fail to disappear under this procedure, so far practiced. Then anæsthesia is advised, so as to carry out this taxis to its proper extent. As to the anæsthetic, we should use one that gives prompt and thorough relaxation, and there is none better than the "Vienna" mixture, which is prompt, carrying it to full anæsthesia, when with posture and properly conducted taxis, now capable of being carried out freely, a few moments, not over fifteen minutes, may be consumed in efforts to reduce the hernia. Failing after that lapse of time may be regarded as proving beyond a reasonable doubt that the constriction is severe and lasting, and can only be relieved by herniotomy.

Here let me say that where measures are to be employed to this extent do not otherwise than have all preparations made for the operation, so that in the event of failure by the taxis, the operation can be proceeded with at once, and without permitting the patient to come out from under the influence of the anæsthetic until the operation is completed and the constriction is relieved.

Now having described the procedures of taxis, and its adjuncts in anæsthesia, are we

ever justified in employing taxis in every case? Let us see. Has it any dangers, and if so, what? Firstly, the hernia may be returned "en masse," that is to say a portion of the intestine may be constricted by the sac with which it has descended, so that the reduction of the entire mass is effected without relieving the constricted intestine. In such a state the destructive processes would go on in the parts as if it were still in the inguinal ring, until sudden collapse and peritonitis would denote the fatal circumstance. How is this to be detected and avoided? We cannot differentiate it as a condition other than strangulated hernia, but the absence of the little gurgle which always notes the return of the intestine freed from constriction—the sound of which is sweet music to the ear of the surgeon—but in its stead a resisting, murmurless return of the mass, and at times a subsequent sense of fullness just within the ring, felt either through it or just above, through the walls of the abdomen, are suspicious signs that all is not right. A recent case of mine in which during the interval of my being called, and my arrival at the bed of the patient, efforts at reduction of an inguinal hernia had apparently proved successful. As the mass had returned, and the patient was entirely freed from pain, he walked about feeling perfectly well with no suspicion of trouble. I learned subsequently that he developed symptoms of obstruction the following day, and died of the same shortly afterward. This case speaks volumes for the operation of herniotomy, rather than any efforts at all of taxis.

Another danger is rupture of the intestine. This may occur in very recent cases through rough handling, and in cases hours or days old, through the fact that destructive processes have thinned or weakened the walls of the intestine at one point to a degree as to permit rupture of the same upon very slight pressure. We have seen in one case that after but six hours of strangulation, the intestine was about to perforate in many places, and rupture could easily have occurred by too great or prolonged taxis. Then, too, the intestine is likely to be distended with gas or fluid, or contents, making rupture all the more liable to be produced. Many cases are cited of perforation through taxis, and this misfortune should be well guarded against.

Then, remembering this, we should be careful about the procedure in any case where many hours have elapsed, or where the tumor is tense, painful or tender, nor should it be entertained in any case where, from the general symptoms, as the vomiting of fecal matter, septic temperature, and its concomitants, we feel assured that through the inflammatory changes in and around the hernia, there is a probability of perforation having already occurred. Here nothing else could be thought of but opening into the sac and dividing the constricting band at the ring.

There is no question but what, in many cases and I may say in many hands, herniotomy is far safer than any other procedure for the reduction of a strangulated hernia. Always a matter of some doubt as to the exact length of time a hernia has been strangulated, the variance of individuals as to their resistant powers, relating to the condition on the extruded portion, the fact that reduction, no matter how easily accomplished, of a part of intestine in imminent danger of perforation, will be followed by such with consequent disaster; compared with the relative simplicity of the operation of herniotomy, under the details of this surgical age, the permissibility of inspection of the constricted portion in order to be sure of the propriety of returning the same into the peritoneal cavity, and lastly, and by far a very important consideration, that in the one operation a radical cure of the hernia through a proper closure of the ring and sac, can be accomplished, places the operation, in my mind, to be preferred in all cases where strangulation has actually existed.

To review, then, in answer to the triple question assigned me, I would advise as local measures for strangulated hernia, the use of cold water, or the ice bag, and a hypodermic injection of $\frac{1}{4}$ gr. of morphine sulphate. Secondly, that postural treatment is advisable in conjunction with the above, and taxis should never be given any special time whatever, and, Thirdly, that taxis sufficient to overcome the strangulation is at all times fraught with danger; that it should, in nearly every case, be associated with posture and anæsthesia; that in no case should it be prolonged for a longer time than fifteen minutes; and in cases down for more than six hours it should not be attempted without the greatest care; and finally, that it should give way to herniotomy in the majority of cases.

In conclusion, the procedure I have adopted in these cases, and which has given greatest satisfaction is as follows:—Diagnosing the case, if acute, tender, inflamed, and fulminate, I apply an ice bag, and give $\frac{1}{4}$th grain morphine hypodermically, while I proceed at once to prepare for operation. This taking, perhaps, a half hour, I again examine the case. If unsuccessful, after two or three minutes, I anæsthetise the patient, and with posture make

another attempt to reduce the hernia by gentle taxis.

If unsuccessful, I proceed to operate, and relieve the constriction, examine the extruded intestine, if to be returned, do so, and close the canal, ring, and tissues, after the method of Bassini, in a radical way. If the case be one of the old kind, no pain to speak of, a good general condition, bowels have but recently moved off (showing tonicity of this tract) I apply the ice bag, give the morphine, and wait for two or three hours for possible change. If none, I proeeed as in the above manner.

I modify this plan when age is a factor in the case, and in old people I permit less delay than in the young. A large number of cases seen by a surgeon, however, are those which have been down some hours, or perhaps days, attended to by the family physician, who has been applying all the usual remedies without avail. In these cases, if the general constitution will permit, I proceed to operate at once, in any and all varieties of cases.

As to the method of operating and the technique of the same, I will not detail, as the gentlemen to follow me have been assigned to that part of the discussion, and will no doubt elaborate upon this part of the procedure.

A Tablet's Soliloquy.

By A. L. Russell, M. D., Midway, Penn.

I am only a little tablet, with a face that is smooth and round;
No fame or glory have I sought, but in virtue I abound.
My parents were honored pillulæ of the ancient U. S. P.;
Some say, in a future issue, my name I'll surely see.

Capsule is a distant cousin, and cachet is my aunt,
Pulveres are my brothers; good lineage you'll grant.
Sprung from this noble family, O, pity, 'tis, how sad,
I'm branded by the pharmacist as wholely, hopelessly bad.

And yet, methinks, the doctor will bid me with him stay;
For medical men do sometimes doubt things that the druggists say.
Into pieces of pine they've driven pills that would melt in a fairy's tear;
And every one knows they've harder pushed the "patents," year by year.

I often note this pharmacist; he's a very peculiar man,
While nominally the doctor's friend, he thwarts him all he can.
He's ever willing to "counter-prescribe," and anxious to "refill."
Though strongly the doctor protests, he's slyly at it still.

When he's out of a prescribed drug, he makes another suit,
So, shamelessly, in secret, he employs a substitute.
And should the doctor specify any certain kind or make,
He'll often urge the patient some other kind to take.

His tinctures are, too often, from fluid extracts made;
In show case and in window the nostrums are displayed.
Prescriptions, when presented, are very quickly filled,
But seldom are compounded quite as the doctor willed.

In times gone by on ethics quite often he did prate,
But now the tale of his decline, though sad, I must relate.
He retails soaps and sponges, likewise cigars and pop,
His former professional domicile is nothing but a shop.

Each one of these shortcomings, wherein the druggists err
Is a covert assault on the doctor; but this does not deter.
These common professional piracies are nothing less than fraud,
And he knows it well when tempted "another make" to laud.

The druggists have their grievances, and tell the story, too,
When meeting in conventions, as druggists are wont to do.
They've talked the matter over: discussed it to an end,
But it never has occurred to them to offer to make amend.

So there's nothing left for the doctor, but to do as others do,
And I think of making this move, he will never have cause to rue.
I'm now no longer lonely, for all my kith and kin,
Have been ordered by the doctor, and now are safely in.

On his shelf we stand in imposing, though professional, array;
And both the doctor and patient have cause to bless the day,
That the doctor, in indignation, attempted to defend
Himself from such outrages; thus our subject has an end.

Treatment of Uterine Diseases in Virgins.

By Oscar S. Brown, Wildomar. California.

Every regular practitioner finds the diagnosis and treatment of uterine diseases as occurring in virgins to be particularly annoying and unpleasant, not only to himself but also to the patient.

The physician is called upon by a patient complaining of irregular or suppressed menses with more or less pain at the periods. By skillful questioning he obtains much the following history: Constipated bowels, frequent desire to urinate, the urine has burning or scalding sensation when voided and deposits a brick-dust sediment after standing a few hours. Oftentimes more or less tenderness over region of womb and ovaries. Loss of appetite, coated tongue, more or less headache, sleeplessness, increasing nervousness, easily worried and annoyed, fretful, sometimes, almost, total inability to move the lower limbs, backache, nape ache, pulse quick, weak irregular and occasional palpitations, cold, clammy feet and hands, and body emitting a foul smelling perspiration. Shows a general hysterical condition and is pale, sallow, and is, in every way, in a poorly nourished condition.

The physician has doubtless ere this decided that the patient has some form of uterine disease and suggests a more thorough examination. To this the patient often objects, and very frequently flatly refuses to have any additional examination made, saying that unless he can treat her without such examination that she will not be treated at all. Now, what is the physician to do? Is he to tell the patient that he can not treat her case unless he is allowed to do as he thinks is best? No! Tell her that he could much more intelligently treat her were she willing to be examined and then to take such treatment as he thought best. But that he will do the best that he can for her under the circumstances.

If the physician be a close observer and a careful student of human nature, he will by this time have gathered many little items of information, of which he can make good use in treatment. He must have as thorough a knowledge as possible of the exact situation and surroundings of his patient.

He should first attempt to correct the constipation by suitable diet, consisting of whole wheat bread, ripe, raw and cooked fruits, cooked vegetables, no tea and but little coffee, and that in the morning. Thorough mastication of the food, meals at regular hours each day. For a time, at least, the patient can be greatly benefited by taking one teaspoonful of phosphate soda in a coffee-cup of water just as hot as can be sipped one half hour before breakfast. This clears the stomach and aids liver and bowels to better act. The hot water can well be taken before each meal. Should the above not be sufficient to relieve the constipation give a tablet at bedtime composed of aloin, belladonna, strychnine and cascara sagrada in such proportions as the special case requires. To this may be added a glycerine suppository in the morning at a regular hour. Also to require patient to attempt to empty the bowels at a certain fixed hour each day, preferably in the morning.

For the general condition, while I do not believe in stereotyped prescriptions, I can not forego mentioning one that was much used by the late Wm. Goodell of Philadelphia. He called it "Mixture of Four Chlorides." It is composed of corrosive sublimate, solution chloride arsenic, U. S. P., tincture chloride iron and hydrochloric acid; the quantities of each to be as the case indicates. Many cases will require some of the above to be omitted and others added. Frequently fluid extract hydrastis combined with strychnine or arsenic, or both, will meet the requirements. In others the tincture chloride iron, quinine and chloride ammonium in solution are required. When there is a tendency to chronic malarial poisoning the ammonia and arsenic do the most good. The hydrastis exerts a beneficial influence on the stomach, liver, and at the same time has quite an influence on the uterine condition.

And last, but certainly of great importance is a course of local treatment, which the physician should have the patient herself to use. Have the patient to provide herself with a square yard of sheeting, a fountain syringe of large size, a bed chamber, one having a rubber outlet to discharge in slop jar is to be preferred. Instruct patient, every night before retiring, to use at least one gallon of hot water as a vaginal injection.

Have her to commence with the water at 105 degrees F. and gradually increase the temperature until it reaches 120 F. It will be some days before she can use it at the higher temperature. Explain to her the importance of having the hips so placed that the shoulders will be lower. The hospital sheeting is to protect the bed and over it had better be used a small blanket folded so as to cover the sheeting and prevent chilling of the body while using the injection.

Every third or fourth evening after using the injection have her to insert well up in the vagina "a uterine tablet," made by Micajah & Co., of Warren, Pa. This treat-

ment will not only benefit many of these uterine cases as they occur in virgins but will cure a large per cent of them, and will add greatly to the success of the physician.

But to be effective, the local treatment, as outlined above must be closely followed for months. Many patients are tempted to neglect it as soon as they feel some relief. They would much rather take medicine by the mouth than to use the injections. The physician should try to impress on the patient the great importance of thoroughly carrying out every detail of the local treatment for months to get the best results.

Report of Cases Treated with Paquin's Anti-Tubercle Serum.

By J. R. Bridges, M. D., Kahoka, Mo.

Modern treatment for tuberculosis, including specific and organic medication, lifts from the once gloomy prospects of those who have the seeds of destruction sown in their system, a shadow; and instead a bright star of hope sheds its cheering luster where once was gloom and sadness.

It would be a waste of time for me to attempt at giving the pathological conditions found in a tuberculous system, that is too well known by the medical profession of to-day, but it is my purpose to give some of the modes of treatment and management, the therapeutic and specific medication, for not only the relief but absolute cure of cases positively known to have tuberculosis general and pulmonary.

It is not true in this day and age of scientific advancement in treating diseases of the human family, that "because a person has consumption death is sure to result therefrom;" cases of relief and cure under proper treatment are too numerous for the most skeptic to any longer doubt, so that the progressive physician can surely answer that the development of tuberculosis can be prevented, and when once the disease has taken hold some cases can be cured.

In testimony of this I here report a few cases:

Case 1.—Miss R. H., age 25, no tuberculous family history, temperature 103 in afternoon, profuse night sweats, incessant coughing, difficulty in breathing, no appetite. Left lung in second stage of tuberculosis as a result of pneumonia and exposure about one year previous to beginning of treatment for tuberculosis.

Commenced the hypodermic injections of Anti-Tubercle Serum (Paquin), and the internal administration of Beechwood Creosote and Cod Liver Oil July 18th, 1897, with marked improvement in the condition of the lung and her general health. At this time, January 20th, 1899, night sweats disappeared entirely, fever likewise gone. Patient feels so much improved she says she is about well.

Case 2.—Miss L. T., age 28, family history of consumption, both lungs in second stage of tuberculosis, temperature 102, night sweats, general emaciation. Commenced treatment by hypodermic injections of Anti-Tubercle Serum (Paquin) August 3d, 1897. Improvement from the very beginning of treatment. Increased in weight 30 pounds, lungs entirely clear. With the exception of a slight bronchitis she is entirely well.

Case 3.—Mr. O. T., age about 25, brother of case No. 2, general tuberculosis effecting especially the bone. Received a slight injury of thumb on left hand over three years ago resulting in tubercular necroses, after successive amputations of thumb, hand and arm, the disease was arrested for a time, then commenced in foot. I have been giving him Anti-Tubercle Serum, alternating with Anti-Streptococcus Serum, since September 20th, 1897. The foot was amputated March 11th, 1898, the stump healed and patient gained his normal health completely. Case No. 1 and No. 2 took nothing but serum.

Case 4.—Mrs. W., family history of tuberculosis. Contracted severe cold about August 23d, 1897. Tubercular laryngitis developed, also pharyngo-mycoses. Commenced the use of Anti-Tubercle Serum (Paquin), and by January 20th, 1898, she seems completely cured, all symptoms disappearing and her general health completely restored.

In giving the serum treatment, it may be necessary in some cases to pay strict attention to internal medication, such as Cod Liver Oil and Creosote, also nourishing food and warm clothing, plenty of out-door exercise in suitable weather, and the very best hygienic surroundings possible. My experience with serum is, that the dose should be increased from a small one to one large enough to get the constitutional effect which may be much less with some patients than others, then keep them on it only for a few weeks at a time and give them a rest, as during this period of rest the best results are often gained.

The market value of a cough was the question submitted to the Birmingham (England) County Court. A barrister sued a railroad company for fifty pounds for discomfort suffered by smoking being allowed in a waiting-room at a station and in non-smoking carriages. The smoking aggravated the barrister's throat, and he was awarded ten pounds.

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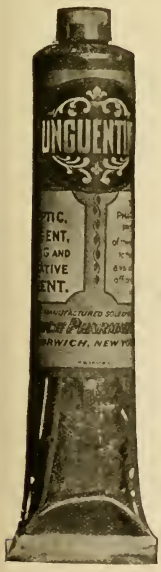

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NORTH CAROLINA MEDICAL SOCIETY.

The Forty-sixth Annual Meeting of the North Carolina Medical Society will be held in Asheville, N. C., on May 31st. The Board of Medical Examiners will meet on Thursday, May 25th, and will be in session six days. Asheville is an ideal place for a medical society meeting. We remember with much pleasure the cordial welcome extended us in 1891. Dr. Battle is Chairman of the Committee of arrangements.

COUNTER-PRESCRIBING AND OFFICE-DISPENSING.

We have recently received a communication from a pharmacist, in the line of discussion on a topic which has lately been pushed to the front in both pharmacal and medical journals, namely, the mutual invasion of territory belonging to these two professions. The tenor of the letter is an excuse for the practice of counter-prescribing, on the ground of lack of legitimate business for the drug store, this lack arising in part from the growing custom of physicians of dispensing their own drugs.

While we grant that the pharmacal profession has probably far exceeded in numbers the demand for its existence and must, therefore, admit the temptation to add to a scanty income by counter-practicing or other means, we believe that all such questions must be settled on ethical grounds and that, in particular, it is merely dodging an issue to attempt to discuss this question on the basis of fair play between two professions.

Counter-prescribing is a criminal offense, according to the laws of almost all States and countries. The time was when the specious claim that every man should be free to practice medicine as he would any other business, had to receive serious attention. But popular opinion has long ago decided that the care of the diseased or injured human being is too important a matter to be left open to the choice of the ignorant and uninformed. Medicine is still free to any one who will and can pass through certain reasonable and necessary preliminaries and this is as free as any equally important avocation ought to be. Counter-prescribing is wrong; first, because it is illegal and everyone owes an allegiance to the law of his country even if he disagrees with it in certain particulars. On this account alone, a druggist who claims the moral right to prescribe over the counter, is on the same plane as a man who excuses himself for smuggling because he is, politically, a free-trader, or as a physician who performs abortions because he does not believe that the foetus has a soul.

Moreover, counter-prescribing is wrong because the druggist is not supposed to have the requisite medical knowledge for the treatment of disease. If he has that knowledge, he can, without much trouble, put in his time in nominal attendance at a medical college and receive the legal right to practice medicine. But the druggist who has simply studied his own profession in a first-class college of pharmacy and who has gained a thorough practical knowledge of it, is still not in any sense fitted to prescribe medicine. If a comparison may be allowed, we would say that he is not so competent to prescribe as an intelligent trained nurse whose first rule of ethics is non-interference with the domain of the physician. No discourtesy is meant in this sweeping statement. There is no reason why the druggist should be competent to act as a physician—no more, for example than that the physician should be a competent lawyer. The ability to prescribe, depends rather on the ability to make a correct diagnosis than on familiarity with drugs, and the art of diagnosis depends much more on physical and chemical procedures than on the mere weighing of the statements of the patient. Thus it is evident that the excuse usually offered for counter-prescribing depends on a claim of knowledge that lies entirely without the schedule of instruction in a pharmacy school and equally beyond the line of experience of the practicing druggist. Moreover, it would be easy to cite case after case of serious harm or even death, due to the attempt of the pharmacist to practice medicine over the counter.

The fair-play argument, "If you give out your own drugs, I'm going to prescribe over the counter," is puerile entirely without justification, legally or historically. Pharmacy is, in the nature of things, simply a branch of medicine. The art of prepar-

ing drugs is worthless except as it follows the knowledge of their application to disease. From the standpoint of the laity—that is of the great mass of the populace for whose benefit both physician and pharmacist exist—the diagnosing of diseases, the prescribing and preparing and even the administering of the remedy are all one process. A break in the series is justified only on grounds of economy or convenience. The pharmacist has voluntarily assumed an incomplete profession, has prepared himself to do part of the original work of the physician and has no claim on the latter except, as for the reason stated, the physician voluntarlly yields part of his original field. No unfairness is involved in this condition of things. If the pharmacist wishes to have an equal voice with the physician in the partition of the work, he has the privilege of graduating in the medical course, then he can compete with the latter on conditions of perfect equality.

The pharmacist to whom we allude at the beginning of this article, complains of the large number of physicians who are carrying their own drug supplies and, naively enough, explains that he knows this to be the case because he himself acted as an agent to bring about just such a state of affairs in the interest of a wholesale drug house. It occurs to us that the pharmacal profession should look to its own ranks to find the real enemies of prosperity. The issue is not so much between pharmacist and physician as between wholesale pharmacist and retail pharmacist.

Again, let us see how far the retail drug trade has justified the cession of the dispensing of medicine to a sub-profession. The separation of medical and pharmacal art is a comparatively recent development. It was purely voluntary on the part of the physician, purely a matter of convenience, entirely free from the element of exchange of values. How many drug stores have confined themselves to the dispensing of drugs? How many have followed the ordinary ethical guides of the medical profession? How many have refused to handle quack medicines which are at once an insult and an injury to the medical profession and a damage to the laity whose welfare has always been the highest aim of the medical profession? In how many drug stores is the prescription safe from promiscuous refilling or from being made to serve as a model of a proprietary preparation? How many druggists are there who do not put forth prominently—even if they do not openly indulge in counter-prescribing—their own cough cures and diarrhœa drops? To what extent does the average pharmacy serve the interests of the physician in compounding medicines more elegantly and more cheaply than he can obtain them elsewhere?

We doubt if there are five cities in the United States in which a drug store can be found which represents fairly, the dispensing fraction of the original medical art and profession—a store which is simply a public dispensary, where patent medicines are unknown and where a prescription is filled once and once only, with conscientious skill and at a fair price.

We do not mean to condemn promiscuously, the entire pharmacal profession nor to advocate the eradication of the retail drug trade. But we would remind fair-minded pharmacists that their work depends like all others, on laws of supply and demand, that wholesale pharmacy places very tempting inducements before the physician to ignore the existence of the retail druggist and that the physician is under no obligation, moral or legal, to decide matters in favor of any one but himself and his patient. There are some physicians, not amounting to a large percentage of the medical profession, who are so busy that they must place practically all their prescriptions in the hands of the retail druggist, in spite of risk of refilling or carelessness in dispensing and who can afford to ignore any possible trespassing by the druggist on the field of medicine. There are physicians, also not relatively numerous, so situated or so inclined that they must or will be their own dispensers, however strictly the druggist confines himself to his legitimate business. The great majority of the medical profession are influenced by their own welfare and the interests of their patients to write prescriptions or to dispense, according to the treatment which they receive from the pharmacal profession. No clamor for "rights" which have no historic foundation will settle the question. It is not enough to claim that the majority of druggists are just and fair in their dealings. The system of checks and drafts would disappear if one business man in a hundred were able to deal honestly with them. The system of prescriptions, resting on the faith of the medical profession in the pharmacal, must also vanish if a very small majority of the latter are found to be untrustworthy. Moreover, if the wholesale druggist can furnish medicines more cheaply or more elegantly or more accurately than the retailer, no sentiment can withstand the operation of inevitable commercial law.

THE DIAGNOSIS OF TYPHOID FEVER.

Probably no disease presents, at times, so many difficulties to the general practitioner

as does typhoid fever. Even in typical cases the onset is so irregular and the symptoms so indefinite as to necessitate several days careful observation before making a positive diagnosis. But not all cases are typical. A recent report of a considerable number of cases places the number which were atypical at about one-half. This seems like a very high percentage, but it should be remembered that all of these cases are impossible of diagnosis without the aid of recently discovered methods. And by their careful use it may be found that infection with the bacillus typhosus is much more common than has formerly been supposed. Many of the cases of "simple continued fever," "gastric fever," "biliousness," &c., may be found to be due to typhoid infection. Abortive cases are probably much more common than the profession in this country has recognized. A fever beginning rather suddenly, running high for three or four days and terminating suddenly, without signs of lung or intestinal involvement, has not usually been diagnosed as abortive typhoid. This disease may begin and run its course with all the signs and symptoms of some other disease. The b. typhosus may enter the bronchial tubes or lung and produce there, either alone or in conjunction with other micro-organisms, inflammatory affections peculiar to that region. A few cases of acute pleuritis have been shown to be due to that cause. Some cases of tonsillitis, pharyngitis, laryngitis and otitis media, can be attributed to it. Inflammation of the kidney and bladder is frequently produced in this way and the bile ducts and gall bladder are a favorite location for this infection. It can be readily understood that inflammation of each of these organs—and others might be mentioned—will produce its own peculiar symptoms, each differing widely from the other and from the classical symptoms of typhoid fever.

How, then, are we to recognize this disease? There are three tests that are extremely valuable aids in making the diagnosis. Erlich's test appears early in the disease—from the first to the tenth day—and is almost always present no matter how slight the infection. But this reaction is found in other diseases—tuberculosis and the eruptive diseases of children, and occasionally in pneumonia, especially in children. This lessens the value of this test very greatly but in connection with other means this test is extremely useful as an early sign of the disease. The count of the white blood cells is an important means of differential diagnosis, especially between this disease and pneumonia.

The serum test of Widal is the most important aid in the diagnosis of this disease. It appears in about 95 per cent. of all cases—perhaps with more accurate observation it will be found to appear in every case. In some rare instances it appears very late in the disease, in the fifth or sixth week, but as a rule it is found from the fifth to the tenth day. In some cases it remits for a day or two and in others it appears only on one or two days; so that examinations must be made daily in order to exclude it. With the use of these three tests almost every case of typhoid fever, no matter how obscure, can be diagnosticated.

CRIMINAL ABORTIONS.

The three great causes for this crime still exist, as set forth by Dr. Storer:

1. Popular ignorance of the real nature of the crime.

2. Apathy on the part of the medical profession.

3. Defects in the law, sustained by long usage, and therefore the more difficult to overcome.

The time is truly upon us when the medical profession should speak plainly and without reserve to the men and women of this country, and show them the enormity of the crimes they are daily committing by the productions of abortions.

Let the mother understand that if she kills, or permits another to kill, the little helpless creature, that is by nature placed in her own womb for life and protection, that is nourished by her own blood and is of her own flesh, that she is equally as guilty as if she should take a club and beat the brains out of her little babe that she nurses and caresses to sleep nightly.

It is the duty of the profession to act together in harmony and endeavor to suppress this horrible crime. They should speak out upon all occasions and let the people be educated to a true understanding of the situation, and collect evidence and send to the penitentiary or have hung, the physician that follows the murder of innocent babes for a living. Such a physician *is not a man*, and is not entitled *to be called a man*; he should be sent back to nature's mint and there killed by some abortifacient scoundrel of his own kind.

The physician that cannot afford to speak plainly of such matters, because it injures his business, deserves none. The preacher who does not refer to such crimes for fear of trampling upon the toes of wealthy church members, omits to speak of the most damnable crime the race is guilty of to-day. The newspapers that advertise abortifacients and the druggists that sell them are

not deserving of the patronage of decent people.

The writer has made this solemn promise to himself, always to be fulfilled: That when any one applies to him for advice in the commission of such a crime, be they rich or poor, white or black, educated or ignorant, he will speak as if before the judgment bar pleading in behalf of an innocent and helpless being, confined within a narrow cell and unable to speak for its own life and liberty, and as much entitled to live and have freedom as any one living upon earth.

'Oh! physician! you are cruel and without feeling, that would not grow eloquent in defense of such a cause. Oh! mother! your heart must be made of stone that would not turn from such a crime, when once understood. Oh! child-murdering wretch! that would follow such a hellish business, the hang-man's noose is too good for you.

THE INTERNAL USE OF CARBOLIC ACID.

In an editorial of the January number of this Journal, attention was called to the importance in the difference of therapeutic value between beechwood creosote and carbolic acid. The statement that many prescriptions calling for creosote were now-a-days often filled by the druggist with the German article, which being made from coal tar instead of wood, was in reality only carbolic acid, is not to be disputed; neither can it be denied that there is danger in such substitution, as creosote is capable of being administered in much larger doses than carbolic acid without causing poisonous results.

The reference to carbolic acid as a remedy of value for external use only may, however, be qualified to a large degree.

The field of usefulness for carbolic acid as an internal remedy is close adjacent to that of creosote, for it was in fact the forerunner of the latter in the treatment of pulmonary tuberculosis. At present it may be said to lay in the arrest of a certain class of germ diseases whose specific organisms are of a weak nature and are easily inhibited in growth from the presence of carbolic acid. A fact, well known to bacteriologists, is that certain bacteria are highly sensitive to the influence of special media, either for their increased fertility and virulence, or on the contrary, for their attenuation or absolute arrest. Such, there is now good reason to believe, may apply to the germ of diseases like influenza and scarlatina, for it has been recognized by good observers that these diseases are easily controlled under the influence of carbolic acid internally administered. This is perhaps not as generally known to the profession as it should be, although carbolic acid has been employed as an internal remedy both for children and adults for many years, in England and America, with marked success in the treatment of septicæmia, scarlatina, influenza and summer diarrhœa of children.

The knowledge of its highly poisonous effects when given in too large a dose, together with the large number of cases reported where poisonous symptoms followed its local application to extensive raw surfaces, especially in children, no doubt caused the remedy to loose favor, but this alone should not be a worthy reason to the profession against its use, for far more potent poisons are in daily use than carbolic acid.

If the physician will associate the internal use of carbolic acid in his mind with a one or two per cent. solution, and the dose as a teaspoonful for children, and even a tablespoonful for adults, it is fair to say no harmful results will be likely to follow. There are no cumulative effects, therefore the dose may safely be repeated every two hours, or with the one per cent. solution even hourly.

Dr. S. H. Dessau, professor of pediatrics in the New York School of Clinical Medicine, in a paper published in the Medical Record, September 12th, 1896, pointed out the usefulness of carbolic acid as an internal remedy in the treatment of some catarrhal diseases of an influenza type as occurring in children, and regarded its use as safe and successful.

Dr. Arthur Wiglesworth, in a paper republished in the Times and Register of February 12th, 1898, from the London Lancet, praises carbolic acid in the highest terms. Sixteen years experience with the treatment led him to conceive the plan of carbolizing the well children in a family where scalatatina occurred, and thus, according to the authority of Flugge, attenuating the specific germ upon its entrance into the system. In this way those who were exposed to the contagion of the disease contracted it in the mildest form, with freedom from the terrible sequels and complete protection against any subsequent exposure. He even goes so far as to state that if the original case is mild and is completely carbolized, he would allow well children to be exposed to the disease, feeling sure that they would receive an attenuated poison similar to a varioloid after vaccination, which would be shorn of all dangerous sequelæ, which in truth are the most dreaded features of the disease.

These views appear to be founded upon able bacteriological investigation and are expressed with so much clearness of reason-

ing that they are worthy of profound study. If others in the profession should be brave enough to apply the ideas of Wiglesworth successfully in practice, an immense and priceless boon will be given to innocent childhood, to say nothing of the glory and fame that will crown the originator.

WHY HAS ALCOHOL BEEN SO POPULAR IN THE TREATMENT OF DISEASE IN THE PAST?

There are some reasons adduced by writers at present why alcohol has been prescribed as a medicine or beverage in the past. Aside from the moral side of the question which has been fully discussed, and we as physicians are as familiar with this phase of the subject as any of the moralists. From the relation which the profession bears to the rest of humanity, being brought constantly in contact with the worst side of mother nature, so to speak. The darker shades of coloring of the human character, are brought out prominently into the foreground of human existence, and are but familiar subjects to the average physician in his daily walks. His acquaintance with the habits of his fellow beings, his knowledge, especially of the habits of eating and drinking, is sufficient to enable him to point out to them the cause and prevention of disease. Among the diseased conditions from which alcohol has been eliminated from their treatment in recent years, according to Dr. August Seibert, appear prominently among the diseases of children, typhoid fever, broncho pneumonia, fibrous pneumonia, scarlatina, measles, and in diphtheria, in which the use and abuse of alcohol has been universal. Although the system may tolerate this drug in these diseased conditions, especially in diphtheria in large doses at a critical period, for a short time, in the nephritis following or coincident with this disease, it certainly does harm, and after all may only serve to mask the symptoms.

The greatest cause for wonder since we have studied our cases with greater care in regard to the treatment is, that the true physiological effect of the drug, does not seem to have been fully understood by the profession. There is an apparent reason to the writer, why there has been such a universal resort to the use of alcohol in the treatment of disease by both physician and laity. And it may be found in the little black bottle in our grandmother's cupboard. The one whom tradition had handed down to us, hidden away in dark recesses to be brought forth in all cases of emergency and on all occasions.

Containing as this heirloom does, the all important medication for all the ills of humanity, and to be loaned to the neighbors —the family medicine, a bottle of whiskey.

If this be true, and I believe the physician has shared in this legacy, no wonder he has imparted it so freely.

The almost universal practice among the laity of using alcohol for all the ills of humanity is too well known to us.

Now if we have erred in sharing in this popular delusion of self-medication we may reasonably expect to eradicate this evil, by educating our patrons and believing ourselves in the dangers of the habits of our ancestors.

IMPETIGO.

"Impetigo faciei contagiosa is characterized by an acute eruption of superficial vesicles, from the size of a pin's head to that of a lentil, on the face, scalp, or neck. They appear every few days to a week, at first disseminated, later aggregated, and dry very rapidly into gummy crusts, beneath which the epidermis forms. Some increase to the size of a dollar in the shape of concentric rings of vesicles like herpes tonsurans or pemphigus serpiginosus. There is a great swelling of the submaxillary glands."—Kaposi.

The first cases of impetigo that I was able to diagnose occurred in the fall of 1894. Three families, in all nine or ten small children, living near a saw mill in the country, had an eruption on the face and a swelling of the submaxillary glands—slight. I first attributed the difficulty to eating nuts, all of them had indulged and the similar condition pointed to a common cause.

In errors of diet the eruption following is urticaria—a wheal should be distinguished from a vesicle, and besides the eruption is general. Idiopathic urticaria, stings and bites of the flea, bedbug, lice, flies, &c., might be local because of only exposed surfaces, but the same distinction is to be made in the character of eruption. Herpes zoster can be ruled out because of its being more painful and is generally unilateral. The cases cleared up with use of zinc ointment. In the family which had the greater number of children, the preponderance of dirt and in which clean water was not "in evidence" there was born another child about six or seven months after the others were well from the eruption. This baby on the fourth or fifth day broke out with blisters on the face and scalp—commenced size of a pinhead to size of a split pea, increased until they became confluent and the cheeks became each a solid blister. Having diagnosed and treated one case of pemphigus my anxiety at this time was to cut down

my mortality table in the direction of pemphigus to 50 per cent. The child was promptly put upon Fowler's solution and zinc ointment.

It is said that doctors can find what they are looking for as a rule. So often with a determination to diagnose not by exclusion and a constant looking for that which fits, we fit our diagnosis to our liking. I had reason to believe afterwards that this was a case of impetigo and that still my mortality remains 100 per cent, in pemphigus, which is a fatal disease as a rule.

Conclusions: 1st. Acute eruptions can often be diagnosed by the classification of vesicular, papillary and pustular. 2nd. In a contagious eruption a common cause should be determined if possible. 3rd. Our patients *do* get well some times in spite of our mistaken diagnosis and treatment.

EXERCISE AND PHYSIOLOGIC CHANGES.

Voltaire once predicted that the end of all things would come when people take to reasoning. This crisis in our mundane affairs is apparently far distant, judging from the lacunæ of reasoning in many of our educated men and women. There is a daily increase in our knowledge, in our application of that knowledge, and a vast improvement in the development of human individuality, but in some matters relating to our physiologic existence there is an absence of clear incised reasoning. This is particularly marked in the advice regarding exercise given to the middle-aged individual.

The man who has in early life been accustomed to athletic sports, ceases regular exercise, as the demands of a busy professional or business career consume his time. At 45 years of age he finds he does not sleep well, feels fat and weak, is irritable, suffers often from indigestion and headache, and retrospectively thinks of his physically happy adolescent days. His physician advises exercise, and the unreasoning man starts out enthusiastically to try and get his muscles, heart and lungs in the condition they were when he was twenty-five years younger. His physician has failed to warn him that he does not now possess the resistive power he once had against undue strains or poisons. The excessive exercise he once undertakes causes his muscles to throw off a greater amount of toxic material than the blood can carry away. The result is some form of auto-intoxication which will demonstrate itself in one of the various neuroses.

The habits of the individual, over-eating, use, and frequently the abuse, of alcohol as well as tobacco, have produced changes in the neurons and nerve centers, which also have probably caused an unphysiologic decadence in these delicate life units. That this has been the case is shown by the restless, uncomfortable condition exhibited when seeking advice. The neurons are already in a retractive, irritable state, and to increase this irritation by the surplusage of dead material thrown off by the excessive contractions of the muscles, shows want of reasoning powers.

The effect of stimuli and poisons on the nutrition as well as on the kenesia of nerve cells are certainly different at different ages of life, and to recklessly plunge into violent exercise after middle life is to invite a condition which will exhaust completely an already depleted nervous system. Men, also, who are approaching the climacteric, are often told they need more exercise when in truth, they need more rest, physiologic rest.

Exercise, of a non-excititing, non-excessive nature is necessary throughout life, but it should be adapted to the age, temperament, heredity, and physiologic condition, and follow the immutable changes of the inevitable physiologic decadence.

This is the art which does mend Nature, but
The art itself is Nature.

LITTLE THINGS IN MEDICINE.

I have so often heard physicians comment upon the prosperity and success of men who were deficient in medical education, and frequently they remark that there is nothing in our profession to encourage a man to try to acquire knowledge, for the student is often outstripped by the man who never reads or studies. Such may be the case but they do not realize that the making of a correct diagnosis and prescribing the proper drugs is only a part of the things necessary to get the best results for your patients. There are hundreds of little details that if improperly attended to may have as deleterious an effect upon the patient as the failure to give them the correct drug. It is only too true that the people in general are not capable of knowing whether a physician is a learned man or not, they do the best they can to try to make an estimate of his knowledge, and their opinions are not formed as much by the medicine prescribed or administered as by the manner and action of the physician himself. For instance, as you measure out your powders, or count out your tablets, they have no idea of what they contain, it may be morphia or it may be chalk; but when you come to give them directions about taking these powders or tablets which you have prepared and tell

them in a hesitating, careless, and indifferent way, then change your mind and directions, they are very apt to conclude that you did not know just what you did want them to do, and if you did not know that, you probably did not know what was the matter, and they want a doctor who does know something, and so you lose the case, and it is a question if the patient's judgment is not a fair one.

THE SOUTHERN MEDICAL JOURNAL.

This is the name of a new medical journal published at La Grange, N. C., and edited by Dr. J. W. P. Smithwick. A copy of the first edition has been received, and it shows that its editor has confidence in the enterprise and displays evidences that he will succeed in the journal business.

In commenting on the appearance of a new medical journal several years ago, we mentioned the great difficulty an editor and publisher has when he undertakes to be equally just to himself, his subscribers and his advertising patrons. Every journal should be conducted on this principle, and those published with other ideas in view should be boycotted by the profession.

The motives of this new journal are evidently pure and good, and its object is not to advertise some special drug house, sanitarium, or hospital, but for the good of the profession. We wish it every success possible.

DR. G. H. SIMMONS, OF LINCOLN, NEB., EDITOR OF THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

The Board of Trustees of the American Medical Association has elected Dr. Simmons, of Lincoln, Neb., editor of the Journal of the American Medical Association. Dr. Simmons has for several years been editor of the Western Medical Review, which is one of the best edited journals in this country. The salary of the new editor is to be $5,000 per annum and he is to devote his entire time to the interest of the journal.

A GOOD LOCATION FOR A PHYSICIAN.

We are requested to state that the people of Denver, N. C., want a good physician to locate there. From what we know of the place and community it is a splendid opening for a good man. We will be pleased to correspond with any one specially interested in the subject. (Methodist and democrat preferred.)

BOOK REVIEWS.

The American Year-Book of Medicine and Surgery, being a Yearly Digest of Scientific Progress and Authoritative Opinion in All Branches of Medicine and Surgery. Drawn from Journals, Monographs, and Text-Books of the Leading American and Foreign Authors and Investigators, Collected and Arranged with Critical Editorial Comments by Twenty-eight of the Leading Specialists and Writers of the Country, Under the General Editorial Charge of George M. Gould, M. D. Illustrated. Price, cloth, $6.50; half morocco, $7.50. For sale by subscription. Philadelphia. W. B. Saunders, 925 Walnut street.

This work represents in a condensed form the latest and best work of our profession. It hardly seems necessary to say more to those who have had copies of former years. The editor of the work is a man who appreciates the wants of the profession and the men who assist him as department editors are able men and well and thoroughly qualified for the work. This year one name has been omitted—the name of Dr. William Pepper. This calls to mind the remarkable influence of this man, the institutions and movements founded, inspired or supported by his inexhaustible energy and wonderful versatility seem to be almost numberless. His place on general medicine is filled by Drs. Alfred Stengel and D. L. Edsall, both of Philadelphia. The subject of General Medicine covers 222 pages and the work has been well done. The next subject discussed is the section on General Surgery by Drs. W. W. Keer and J. Chalmers DaCosta. Two hundred and fifty pages are devoted to this branch. The most noted revolutionary surgical progress mentioned is the total removal of the stomach by Schlatter.

Dr. Barton Cooke Hirst and Dr. W. A. Newman Dorland next treats the subject of obstetrics covering 60 pages. One of the nicest features of this section is the microscopy of obstetrics, especially in fœtal pathology and the pathology of the fœtal appendages.

Drs. Baldy and Dorland give us 75 pages on Gynecology. In the summary of the year's work they say:

"On looking over the field one cannot but be strongly impressed with the striking change that has come over the sentiment of the abdominal surgeon during the past few months. The radicalism that has dominated his work heretofore has largely given way to a conservatism that will undoubtedly redound to the welfare of womankind and the human race. The aim to-day is not

to see how much can be safely removed, but how many of the pelvic organs can be saved. Hence we see myomectomy supplanting hysterectomy, and vaginal incisions and drainage making heavy inroads upon abdominal section."

One of the most interesting chapters and one of the most important is that on Pediatrics, occupying 45 pages. Drs. John Guiteras and David Risemon edit the section on Pathology, and Dr. Archibald Church that on Nervous and Mental Diseases.

The other sections treated are Orthopedic Surgery, Drs. V. P. Gibney and J. H. Waterman; Ophthalmology, Drs. H. F. Hansell and Wendell Reber; Otology, Dr. C. H. Burnett; Nose and Larynx, Drs. E. Fletcher Ingals and H. G. Ohls; Cutaneous Medicine and Syphilis, Drs. Louis A. Duhring and M. B. Hartzell; Materia Medica, etc., Drs. H. A. Griffin and J. R. Tillinghast; Anatomy, Dr. C. A. Haman; Physiology, Dr. G. N. Stewart; Legal Medicine, Dr. Wyatt Johnson; Public Hygiene and Preventive Medicine, Dr. S. W. Abbott; and Physiological Chemistry, Dr. J. J. Abel. Thus is covered the whole field of medicine and the medical sciences.

It is impossible to give too much praise to this excellent work. It is a book that holds within its covers a record of practically all the progress that has been made during the year it claims to cover. It is not only a book for the student, the teacher, and the writer, but for the "busy physician," for here he will find the latest ideas on the treatment of every disorder, as well as the latest views on the pathology of the most common as well as the most obscure of diseases. The work as a whole contains over 1,100 pages, and a full and well arranged index places all this vast amount of information in easy reach of the student. The book is well illustrated, and the work is a credit to the enterprising publisher.

An American Text-Book of Diseases of the Eye, Ear, Nose, and Throat. Edited by G. E. De-Schweinitz, A. M., M. D., Professor of Ophthalmology in the Jefferson Medical College, Philadelphia; Consulting Ophthalmologist to the Philadelphia Polyclinic, etc., and B. Alex. Randall, M. A., M. D., Ph.. D., Clinical Professor of Diseases of the Ear, in the University of Pennsylvania, etc. Philadelphia—W. B. Saunders, 925 Walnut St. 1899. Price, cloth, $7.00 net. Sheep, or half-morocco, $8.00 net.

This is the most complete and comprehensive book we have reviewed in years, It ranks favorably with the other volumes of the "American Text-Book Series," which have demonstrated their worth and have had their reward in the appreciative reception which has been accorded to them. In the portion of the work devoted to the eye, its embryology, anatomy, histology, physiology, diseases and injuries are discussed in twenty-four sections by twenty-four authors; its operative surgery in seven sections by as many authors; while certain practical details in the examination for color blindness among railroad employes, etc., receive attention in an appendix containing five sections.

In the portion of the work devoted to the Ear, its anatomy, physiology, diseases, and injuries are discussed in thirteen sections by fourteen authors; while the diseases of the Nose and Throat are described in twenty sections by nineteen authors.

Certain novel features not usually found in text-books may be noted: Special articles on the standards of form and color-vision required in railway service. The Rœntgen rays in ophthalmic surgery, the practice of ophthalmic surgery, the practice of ophthalmic operations on animal's eyes, the most important micro-organisms having etiological relationship to ocular disorders, etc.

The work is essentially a text-book on the one hand, and, on the other, a volume of reference to which the practitioner may turn and find a series of articles written by men who are authorities on the subjects portrayed by them.. The above is a general outline of the arrangement of the work. One can see at a glance the magnitude of the work. The work is well arranged, the type is clear and the make-up excellent. The illustrations are many, exceedingly fine, and profuse. The authors and the publisher are to be congratulated upon the preparation of this work. This treatise may be regarded as conservative, clear and concise exposition of our present knowledge of the subjects under discussion, and can be conscientiously recommended to the student, the general practitioner and to the specialist, as a standard authority on these branches of medical science.

An Experimental Research into Surgical Shock. By Geo. W. Crile, A. M., M. D., Ph. D., Professor of the Principles of Surgery and Applied Anatomy in the Cleveland College of Physicians and Surgeons, &c., Philadelphia. J. P. Lippincott Company.

John Hunter, in 1784, was probably the first to describe shock. William Clowes, 1568; Wiseman, in 1719, and Gavengeat, 1723, recognized shock and attributed it to the presence of some foreign body in the wound or in the blood. As Warren has

said, "though the literature of the subject is considerable since it received a place in surgery, yet few writers attempt to define the nature of shock. This is the first book, so far as I am aware, that gives an account of any considerable experimental research into surgical shock. In the opening of the work is given an interesting and instructive historical account as to theories concerning shock. The work is filled with beautiful diagrams, giving complete records of each experiment, including the tracings, description of the animal, of the experiment and of the autopsy. The book is neatly bound and handsomely printed.

The Practice of Obstetrics. By American Authors. Edited by Charles Jewett, M. D., Professor of Obstetrics in Long Island College Hospital, Brooklyn, N. Y. In one handsome octavo volume of 763 pages, with 441 engravings in colors and black, and 22 full-page colored plates. Cloth, net, $5; leather, net, $6. Philadelphia and New York: Lee Brothers & Co., Publishers, 1899.

This work containing nearly 800 pages has been spared no expense to make it the leading work yet issued in America. To the young physician just from college, just entering upon his practical life work, there is no port that lies before him of greater importance than midwifery. It is not only important to him, but equally so to the women entrusted to his care. The work before us is a complete exponent of the modern views of every branch of the art of obstetrics by specialists in their particular line. The work is an entirely new one and is "a clear and practical treatise suited to the needs of medical classes" and is a work of special value to the general practitioners who do obstetric work. It has been written by experienced teachers and each chapter is deserving of the highest praise for the completeness with which each subject is covered and the conciseness with which the whole has been placed before us. The anatomy of the parts involved, both maternal and fœtal is accurately given in detail. All that relates to diseases and disorders and to the management of labor itself shows that experienced clinicians and wise professors are the authors. The illustrations are beautiful and elegant and the general appearance of the book and the thorough manner in which the subject has been handled—all combined to reflect great credit upon the publishers and editor.

The following is a list of contributors: R. L. Dickson, E. H. Bartley, W. W. Browning, Henry Dwight Chapin, J. Clifton Edgar, Allen McLane Hamilton, Chas. Jewett, J. M. Van Cott, Hiram N. Vineberg, of New York; Augustus H. Buckmaster, Charlottesville, Va.; J. Chalmers Cameron, J. Clarence Webster, Montreal, Canada; Edward P. Davis, Philadelphia; James H. Etheridge, Fernand Herotin, Chicago; Walter P. Manton, Detroit; Chauncy D. Palmer, Cincinnati; Hunter Hobb, Cleveland, and J. Whitridge Williams, Baltimore.

A Treatise on Fractures and Dislocations. For Practitioners and Students. By Lewis A. Stimson, B. A., M. D., Professor of Surgery in Cornell University Medical College, New York. In one octavo volume of 823 pages, with 221 engravings and 20 full-page plates. Cloth, $5.00 net. Leather, $6.00 net. Just ready. Lea Brothers & Co., Philadelphia and New York.

Some years ago there appeared the author's two volume work, now out of print, and while this volume in a certain sense may be considered a second edition, yet it has been so materially altered and so largely re-written it is practically new. There is probably no man who has had a wider experience in traumatic surgery than Dr. Stimson. He has seen examples of the rarer forms of injury and some not heretofore described. The eminent author has condensed his most comprehensive experience into a form adapted particularly to the needs of the student and practitioner, but the work will be none the less a standard reference book for the surgeon and the student of special subjects who will find the abundant bibliography of indispensable value.

It is believed that in the elimination of historical matters and in the substitution of settled opinions for the previous discussions of divergent views, the directness and applicability of the knowledge presented will increase the favor with which the original work was received.

The illustrations have been subjected to equally thorough revision and embrace many new pictures, notably a rich and instructive series of X-ray full-page plates.

The mechanical execution is admirable and we commend this volume to all who desire the best work of this kind.

Self-Examinations for Medical Students, Philadelphia: P. Blakiston's Son & Co.

This little book has been prepared by a medical man, a teacher and a writer of experience, with special reference to the actual wants of the medical student. By its help the student can successfully quiz himself on all the important branches, or review any one subject in which he feels himself to be particularly deficient. It is a useful little book.

Diseases of the Eye. A Handbook of Ophthalmic Practice for Students and Practitioners. By G. E. DeSchweinitz, A. M., M. D. Third Edition. Philadelphia: W. B. Saunders, 925 Walnut St. 1899.

This is the third edition of this handsome and valuable book, and it will meet the favorable reception which has been accorded its predecessors. It has been thoroughly revised and much new matter has been introduced. The writer and work are so well known by the medical profession at large that a review seems entirely out of order. The past record of the former two editions gained such a favorable opinion from the profession at large that merely an announcement of this edition will be all that is necessary. In this edition particular attention has been given to the important relations which micro-organisms bear to many ocular disorders. Special paragraphs on the following subjects appear for the first time: Favus of the Eye-lids, Blepharochalasis, Koch-Weeks' Bacillus Conjunctivitis, Diplo-Bacillus Conjunctivitis, Parinaud's Conjunctivitis, &c., &c. It is thorough and complete in every sense. It gives in a clear and concise manner every thing pertaining to the diseases of the eye and its complications and sequelæ. It is handsomely printed, well bound and reflects much credit upon both the author and the publisher.

Fever Nursing. By Dr. J. C. Wilson, A.M., M. D. J. B. Lippincott Co., Publishers, Philadelphia.

This is a small book containing several lectures on fever nursing delivered before the nurse class of the Philadelphia Hospital. The subject is presented in a plain way. The directions and descriptions are intended to meet the needs both of the profession and nurse, and of others who may be called upon to minister to fever cases, and to enable each of these classes of attendants to understand the principles of treatment upon which the directions of the physician are based. The book is a useful one, and should not only be read by all nurses, but by physicians as well.

A Text-Book of Mechano-Therapy. Especially prepared for the use of Medical Students and Trained Nurses. By Axel V. Grafstrom, B. S. C., M. D. Philadelphia: W. B. Saunders, 925 Walnut St. 1899.

This little volumn of 139 pages contains much durable and useful material. The subject is somewhat new and very interesting. It has been presented in a condensed form, and in a rational and popular way, in order to make it easily understood by the student

The Dawn of Reason or Mental Traits in the Lower Animals. By James Weir, Jr., M. D., New York. The Macmillan Company, 1899.

Most works on mind in the lower animals are large and ponderous volumes, replete with technicalities, and unfit for the general reader; therefore the author of this book has presented the evidences of mental action, in creatures lower than man, in a clear, simple and brief form. He has avoided all technicalities, and has used the utmost brevity consistent with clearness and accuracy. The book contains 234 pages and is nicely bound and neatly printed.

A Compend of Human Physiology. By Albert P. Brubaker, A. M., M. D. Ninth Edition. Philadelphia: P. Blakiston's Sons & Co., 1012 Walnut St. 1899. Price, 80c.

The continued demand for this Compend has been so very great as to call for the Ninth Edition. They are very replete with valuable information in a most condensed form. For medical students they are of great help. For quick reference, complete answers they are very handy. Their continued demand show their value.

LITERARY NOTES.

It is a long time since The Forum has had such an interesting list of subjects as that offered in the March number. Here are some of them: "Diplomatic Pay and clothes," by Mark Twain; "Is our Army Degenerate?" by Col. Alexander S. Bacon; "The Future of Our Navy," by Capt. H. C. Taylor, of the United States Battleship "Indiana;" "Life on Other Worlds," by Prof. D. T. MacDougal; "What shall we do with the Philipines?" by ex-Minister Charles Denby; and "A Lost Eden—Cuba," by Dr. Felix L. Oswald.

The event of the literary year will be, undoubtedly, the great novel upon which Count Tolstoy has been laboring in order that he may devote the proceeds to the transportation to Canada of three thousand Russian Quakers. It is generally believed by his friends that this work will probably mark the conclusion of Count Tolstoy's literary career. Not merely on this account, but because of the subject treated, it will attract the widest attention the world over. It is a profound study of the life of man and woman, and treats of the three phases of love—that of the youth, that of the young man, and that of the man in mature age. The Cosmopolitan Magazine announces that it has secured the sole right of publication.

Lippincott's Magazine for February, 1899.—The complete novel in the February issue of Lippincott's is "For the French Lilies," by Isabel Nixon Whiteley. The action is chiefly in Italy in 1511–12, and in this remote period the author shows herself at home.

Wardon Allan Curtis tells "The Tale of the Doubtful Grandfather," and a most extraordinary tale it is, such as surely was never told before. In "A Night in Devil's Gully," Owen Hall records an Australian experience of a kind now happily rare.

Austin Bierbower, in "A Diplomatic Forecast," predicts that the leading and predominant powers will soon be England, Russia, and the United States, with Germany as a bad fourth—unless she attacks and overcomes Russia before the latter has carried out her Asiatic plans.

"Cyrano de Bergerac," the play now so much talked of, is the subject of an article by Lionel Strachey. H. E. Warner inquires, "Will Poetry Disappear?" and inclines to think it will.

"Lambeth Palace" is briefly described by G. F. Burnley. D. O. Kellogg writes of "James Wilson and His Times," and James M. Scovel supplies some "Recollections of Lincoln."

The poetry of the number is by Viola Roseboro, Dora Read Goodale, Clarence Urmy, and Harrison S. Morris.

"The White Man's Burden" gives the keynote of the American Monthly Review of Reviews for March. The editor, in "The Progress of the World," discusses the Philippine situation and American prospects in those islands, as well as the bearings of the ratification of the Spanish treaty on the future of the Filipinos. Col. William Conant Church, editor of the Army and Navy Journal, contributes a sketch of Gen. Elwell S. Otis, whose efficiency in subjugating the refractory followers of Aguinaldo is winning the admiration of the world. There are two articles on Philippine native types and characteristics, one of which was written by Señor Carony Mora, editor of Voz Española, of Manila. These articles are both illustrated from a remarkable series of photographs now published for the first time. Dr. William Hays Ward, who has recently returned from an extended journey through Porto Rico, contributes an article on present-day conditions in that island, with special reference to the efffect of American occupation on the welfare of the people. Several of the poung Cuban leaders in the reconstruction of their country are sketched by George Reno. This number of the Review also contains articles on the late President Faure, of France, on "An American Farmer's Balance-Sheet for 1898," and on "Characteristics and Possibilities of Middle Western Literature."

In the February number of the American Monthly Review of Reviews the editor seeks to apply the lessons of our national failures in the South during the reconstruction period following the Civil War to the present problems of a similar nature in Cuba, Porto Rico, and the Philippines. His deductions are interesting and instructive. He says: "The true way to restore the South to the Union after the war was to restore the South to its own people." The same principle applies to-day in the new territories just coming under our control. The editor warns us against a new type of "carpet-bagger" who is threatening to invade Cuba—namely, the franchise-grabber. A large proportion of space in this number of the Review is given up to editorial and contributed articles on the management of foreign dependencies. Sylvester Baxter contributes an interesting study of the Dutch rule in Java, and Dr. Daniel Dorchester makes a statistical exhibit of the recent driftwto dards colonial and protectorate government.

That neither patriotism nor good sense is yet extinct among Spanish writers on public affairs is clearly proved by the article on True National Greatness which The Living Age publishes in its number for March, 4. It is written by E. Gomez de Baquero, and is translated from La Espana Moderna. It is a very sane and candid article, and shows a clear perception of the needs of Spain.

MISCELLANEOUS.

The Use of Morphine in Cardiac Disease.

Dr. Alexander Morrison (Treatment, February 9th, 1899). There can be no question that one of the tendencies of a knowledge of the wheels of life is to render one at times not only cautious, but, it may be, too timid in the use of powerful therapeutic agents. The writer saw a case of mitral valvular disease some time ago in consultation, which was in a condition of tachycardial and disordered action, and in which the patient suffered a good deal from insomnia. In addition to other measures indicated, morphia, in a moderate dose, was ordered to be taken at bedtime, four doses or so being prescribed. The case certainly im-

proved rapidly, but the medical attendant of the patient was good enough to inform the writer afterwards that he did not consider that the latter had rendered very valuable assistance, and that the case had been cured by the nurse! But for her sex, we might quote the familiar proverb that fools at times rush in with benefit where angels fear to tread. The nurse administered, not one dose of the hypnotic, but the bottleful! The patient slept soundly for a long time, and awoke comparatively well. Needless to remark, such heroic treatment has its hazards, but very little experience will convince anyone conversant with the management of cardiac cases that he who loses sight of his hypnotics in sleepless heart cases may save himself the trouble, and the patient the annoyance of taking cardiac stimulants. Digitalis has been termed under some circumstances the opium of the heart, from a false view of its depressant action, but under the circumstances mentioned opium itself may be the only remedy likely to improve the situation. Dr. F. S. Toogood did good service, therefore, in calling attention to this point in the Lancet for November 26, 1898. He there relates five cases in illustration of the beneficial use of opium in heart disease. His cases included instances of obstructive and regurgitant valvular lesion of the aortic orifice, a case of double mitral disease, and one of mitral regurgitation. In one of his cases the urine was albuminous to a third. In all the use of opium greatly benefited the case, and in that complicated with albuminuria, the albumin returned when the opium was abandoned. The kidney was doubtless chiefly affected by the retrograde stasis. It is with the use of opium under these circumstances as it is with the employment of mercury. An essentially renal case, when the kidney is involved in a considerable nephritic state, will not respond to opium any more than it will to mercury; but when the disorder is essentially circulatory, the patient sleepless, and the heart overworked, a good result may be expected to follow the use of opium in moderate doses, repeated, if need be, at intervals of four hours if the state of the patient and urgency of his symptoms demand it. Dr. Toogood is inclined to think that "the undoubtedly beneficial results in cardiac disease are due to its action upon the nervous apparatus of the cardio-vascular system, both central and local, bringing rest to an overstrained organ and allowing it the chance of developing its recuperative power." Rest of brain in its psychical sphere, assuaging the local irritability of an organ richly supplied with nerves, and the general peripheral relaxation of the vascular system as denoted by the genial surface warmth of sound sleep, cannot be otherwise than beneficial under these circumstances.

Nasal Bacteria in Health.

Park and Wright (Journal of Laryngology) publish the results of their experiments on this very interesting subject. The question of the bacterial cleanliness of the mucous membrane of the nasal cavities has been answered in widely different ways during the last few years. It is generally admitted that the vestibule is full of bacteria, but varying results have been obtained by cultures taken from the septum and turbinates, well inside of the nasal openings, in healthy persons. In these experiments the secretion from the nasal mucosa of thirty-six individuals was examined, the greatest care being taken that it did not become contaminated in the vestibule. Cultures were made upon different media: in six cases no bacteria were developed; in eight, less than fifty colonies; in eight, between fifty and one hundred, and in fourteen, one hundred. No attempt was made to identify the various forms of micro-organisms, except to search for streptococci, none of which was found in any case. This was in marked contrast to the results obtained from cultures of the nasal mucus from a number of children living in an asylum, in 60 per cent. of whom streptococci were found. The nasal mucous membrane in none of these was quite normal. The bactericidal effect of the nasal mucus was also studied, both by sowing a culture of streptococcus upon the nasal mucous membrane of rabbits, and by collecting nasal mucus and noting its effect upon diphtheria bacilli, pseudo-diphtheria bacilli, staphylococci, streptococci and a coccus obtained from the normal mucus. In no case was the nasal mucus found to have any bactericidal action. Although a number of bacteria are found in normal nasal cavities, it is doubtless true that the mucus from a healthy nose is not as full of germs as might at first be supposed. This comparative scantiness is probably due (1) to the action of gravity, clear serum draining down from regions in the nose to which the inspired air does not have free access washes away the bacteria deposited by the tidal air; (2) to the action of the cilia; (3) to the fact that the nasal mucus, while possessing little or no bactericidal power for most bacteria, is not a good medium for most bacteria to grow in; (4) in some cases, to the filtering action of the hairs; and (5) to the fact that ordinarily the inspired air contains very few pathogenic germs.

The authors conclude that for bacteria

which have developed in the blood or secretions of other animals, the bactericidal power of the nasal mucus is little or nothing and cannot be depended upon to prevent an infection from virulent bacteria if they are carried into the nose by instrument.

Dysmenorrhœa.

Fry, (American Journal of Obstetrics) discusses this subject as follows:

Its simplicity; no anæsthetics and no assistants are necessary. The treatment is carried out at the physician's office, and the patient is spared the mental suffering of having to undergo an operation. Many will consent to this method of treatment who will refuse harsher means.

Its safety. It is devoid of any other danger, unless imprudently used. The electrode is made to traverse the cervical canal slowly. It is arrested at the contracted portion until the electrolytic action permits it to pass without the use of force.

The result is good. You must consider both the immediate and the remote effects. The immediate effect is favorable, because the galvanic current is in itself a valuable therapeutic agent, and often suffices to cure attending morbid states of the uterus. Neuralgic pains, uterine fixation and inflammation, hyperæsthesia, and atrophy of the mucous membrane often disappear without further treatment. The relief of dysmenorrhæa follows. What proportion of cases of sterility can be cured is a question for the future to decide.

What Shall the Physician Say to a Gonorrheal Patient who Desires to Marry.

Kromayer (International Medical Magazine) makes the following statements:

If the presence of Neisser's gonococci is demonstrated, the physician's duty is clear and needs no elucidation. But, if the bacteriological examination is negative, his answer should cover the following points:

As a negative bacteriological examination is not an absolute proof of the absence of gonococci, it is the patient's first duty to make an earnest and sustained effort to rid himself of the gonorrhea or chronic inflammation of the urethra by a systematic course of specific treatment. This is not to be neglected even in cases where the examination has for a long time repeatedly failed to detect gonococci.

If a complete cure is found impossible, or if the patient refuses to subject himself to further treatment, the physician should explain the case under its various aspects, and leave the decision with the patient. In no case is the physician to assume the responsibility of the gonorrhea not becoming infectious.

If the patient decides to marry, the physician should impress upon him the fact that he is still capable of giving the infection, and must, therefore, observe the following rules in sexual intercourse:

1. Urinate immediately before sexual congress to expel any secretion that may have accumulated in the urethra.

2. Avoid as much as possible having intercourse oftener than once a day.

3. Never perform the act twice in succession, because, if the first seminal discharge contains gonococci, the friction attending the second coitus brings them into closer contact with the urethra and cervix, thereby increasing the danger of infection.

If this rule is disregarded, and the act is performed more than once in twenty-four hours, the vagina should be thoroughly flushed out with a vaginal douche, which should, in general, be employed as often as possible.

Hemorrhage as a Sign of Congenital Syphilis.

In the course of the description of a case of hemorrhagic congenital syphilis appearing as a hemorrhagic vesicular eruption, Dr. William S. Gotthell calls attention to the importance of otherwise unexplainable bleedings in infants as symptoms of congenital lues. They may be the only mark of the disease, especially at first; but they are almost invariably accompanied by a diminution of the coagulability of the blood similar to that of hæmophilia, and the case usually goes on rapidly to a fatal termination. Disease of the vascular walls is one of the commonest and best known effects of the syphilitic poison, leading to hemorrhagic discharges from the mouth, the bowels, the bladder, or the nose; to blood accumulations under the skin and mucosæ, or in the serous cavities and internal organs; or finally, making the syphilitic eruption itself hemorrhagic. The author emphasises the importance of remembering these facts in the treatment of infants who have hemorrhagic discharges or a hemorrhagic eruption the cause of which is obscure.

Death of R. W. Peacock, M. D.

Dr. Peacock, of Jersey City, N. J., died February 6th, at the age of seventy-two. He was born at Goldsboro, N. C., and practiced medicine there for several years. He moved to Jersey City in 1875.

Report of the War Investigating Committee.

Details regarding the management of the War with Spain, and its medical aspects, which particularly concerns us, have been so thoroughly discussed and from so many points of view that the final appearance of the Commission's official reports offers comparatively little with which we are not already familiar. It must, however, be of value in fixing our ultimate judgments as to so-called abuses and incompetency in the period during, and immediately following war.

The Commission, says the Boston Medical and Surgical Journal, has decided that "there was lacking in the general administration of the War Department during the continuance of the War with Spain that complete grasp of the situation which was essential to the highest efficiency and discipline of the army." Apart from any inherent weaknesses it may itself have had, it is now surprising that the Medical Department should have came in for its share of censure. The general mismanagement of transportation was in itself sufficient to handicap seriously the work of the surgeons. As the report puts it: "The loading, shipping and unloading of medical stores are not done under the orders of the Medical but of the Quartermaster's Department, and the Medical Department is not responsible therefor." Farther on in the report we read: "The responsibility for the conditions at Chickamauga rests upon those who assembled over 60,000 raw levies and kept the great mass of them together for weeks, and upon those whose duty it was to inspect, advise and order—officers, medical and military, regimental, brigade, division, corps, and of the camp, and the higher the authority the greater the responsibility."... "Praise should be given to the well-trained, faithful, hard-working and over-worked surgeons, who, on the fighting lines and in the hospitals, thoroughly discharged their duty, and who, as General Young has said, 'deserve the thanks of the American people for their splendid work.'"

It is pointed out that mistakes were made in sending so large a number of men to Montauk, when the hospital there established was not properly prepared for their accommodation and medical care. As Camp Wikoff was to be a place of rest and recuperation for the sick army expected from Cuba, and at the same time a quarantine station for the protection of the country, it would certainly, for every reason, have been better if these thousands of men and animals had not been ordered to Montauk. Their arrival and presence increased the confusion and added to the burdens of all officials, military and railroads. Hospitals established after the middle of August at various places were conducted in such a way as to give no good ground for criticism.

A cause of complaint to which the Commission refers, and certainly one to which much attention has been directed, was the inexperience of officers and surgeons as to proper methods of sanitation, a serious defect which measures should be taken to remedy.

The report discusses in detail essentially all the matters which have been occupying so much space within the lay and professional journals, and, on the whole, is judical in the statement of its conclusions, which are as follows:

1. That at the outbreak of the war the Medical Department was, in men and materials, altogether unprepared to meet the necessities of the army called out.

2. That as a result of the action through a generation of contracted and contracting methods of administration, it was impossible for the Department to operate largely, freely, and without undue regard to cost.

3. That in the absence of a special corps of inspectors, and the apparent infrequency of inspections by chief surgeons, and of official reports of the state of things in camps and hospitals, there was not such investigation of sanitary conditions of the army as is the first duty imposed upon the Department by the regulations.

4. That the nursing force during the months of May, June and July was neither ample nor efficient, reasons for which may be found in the lack of a proper volunteer hospital corps, due to the failure of Congress to authorize its establishment, and to the non-recognition, in the beginning, of the value of women nurses and the extent to which their services could be secured.

5. That the demand made upon the resources of the Department in the care of the sick and wounded was very much greater than had been anticipated, and consequently, in like proportion, these demands were imperfectly met.

6. That powerless as the Department was to have supplies transferred from point to point, except through the intermediation of the Quartermaster's Department, it was seriously crippled in its efforts to fulfil the regulation duty of "furnishing all medical and hospital supplies."

7. That the shortcomings in administration and operation may justly be attributed, in large measure to the hurry and confusion incident to the assembling of an army of untrained officers and men, ten times larger

than before, for which no preparations in advance had been or could be made because of existing rules and regulations.

8. That notwithstanding all the manifest errors, of omission rather than of commission, a vast deal of good work was done by medical officers, high and low, regular and volunteer, and there were unusually few deaths among the wounded and the sick.

The Commission makes definite recommendations for the future conduct of the Medical Department, urging the necessity of a larger force of commissioned medical officers; authority to establish in time of war a proper volunteer hospital corps; the establishment of a reserve corps of selected trained women nurses; extra supplies of all sorts to be held constantly on hand; improvement in transportation; less red tape; the authorization of surgeons to purchase such articles of diet as may be necessary for the proper treatment of soldiers too sick to use the army ration.

On the whole, we must regard the report as a fair statement of the conditions as derived from the evidence at the disposal of the Committee.

On Ocular Affections in Puerperal Eclampsia.

C. Zimmerman (Archives of Ophthalmology, September,) states that in no textbook on Ophthalmology or Obstetrics, nor in any treatise on the relation of ophthalmic to general disease, is there information concerning ocular affections in puerperal eclampsia.

He reports a case at length, in which eclamptic attacks began in the fifth month of pregnancy, continued at intervals till six months after delivery, when sudden death took place. Examination two months after delivery revealed slight, left hemiplegic symptoms and decided contraction of the left visual fields. At the *post-mortem* he found a large focus of white softening in the left occipital lobe, at the floor of the posterior horn of the lateral ventricle.

He then proceeds to give a *resume* of the literature on the subject for the past twenty years, dwelling on the pathological changes in the brain. These lesions were found to be: hemorrhages varying in size from microscopic to very large apoplectic foci, embolism, thrombosis, secondary softening, and œdema. The ocular symptoms were found to be: contractions of the visual field, hemianopia, amblyopia, and amaurosis. Great confusion exists in the minds of some observers as to the difference between eclamptic and uræmic attacks. Zimmerman favors the theories of those who hold that uræmia, though often dependent upon eclampsia, is a secondary affection, the eclamptic seizures being due to the presence of abnormal fœtal or placentar cells in the circulation.

He concludes that in eclampsia there are chemical changes in the blood and anatomical changes in the vessel-walls, both due to "auto-intoxication with globulines or products of retrograde metamorphosis of albuminous metabolism from the maternal and fœtal cells." These substances create a tendency to coagulate the fibrine of the blood, which entails thrombosis and embolism, and, by irritating the convulsion-centers, give rise to the attacks. The convulsions produce commotion of the brain, and increase the blood-pressure, leading to rupture of the vessels. The ensuing hemorrhages, foci of softening, and necrosis of brain-tissue, when involving the optic centres or paths, give rise to amblyopia, amaurosis, hemianopia and contraction of the visual field.

Bacteriological Investigations of the Etiology of Ophthalmia Neonatorum.

Grœnouw of Breslau read a paper under the above heading before the Ophthalmological Society at Heidelburg, August, 1898. (Archives of Ophthalmology, September.)

The conjunctival secretions in the cases of forty newly-born children having conjunctivitis, simple and blennorrhœal, were used in the preparation of cultures in various medea, and of cover-glass specimens. In about one-third of the cases, most of which were mild, catarrhal cases, no definite bactericidal results were found; the only bacteria growing in the cultures being white staphylococci and a few yellow cocci and xerobacilli, together with several different non pathogenic micro-organisms. Diplobacilli and virulent diphtheria bacilli were not present in any of the cases.

Gonococci were found to be the cause of the conjunctivitis in 14 cases, pneumococci in 5, staphylococcus pyogenes in one and bacterium coli in 3. Gonococci in pure culture were only present once, while in the other thirteen cultures they were mixed with pneumococci, Friedlander's pneumonia bacilli, white staphylococci and xerobacilli. The gonococci were found in the conjunctival sac for some time after the cessation of supperation, in one instance as late as twenty-five days; he therefore recommends that treatment should not end when suppuration ceases.

The five cases in which the pneumococcus was present were of a milder or severer form of catarrh, rather than blennorrhœa, and recovered more quickly than the others. The

three cases produced by the bacterium coli were classed as severe catarrhal conjunctivitis.

In the severer cases of blennorrhœa the gonococcus was the cause; in the milder cases, the gonococcus and the bacterium coli. In the severer cases of catarrhal conjunctivitis about half were ascribed to the pneumococcus, staphylococcus and bacterium coli, while in the other half, together with the mild cases, no definite bacteriological results were found.

He therefore concludes that the clinical picture does not warrant any definite conclusion as to the exciting cause.

In the discussion which followed, Leber emphasized the existence of a typical blennorrhœa and held that, while mixed infection may occur, the true cause was always to be sought in the gonococcus. Schmidt-Rimpler and Bach were of the opinion that true blennorrhœa could occur without the presence of gonococci.

Dont's for the Treatment of Pneumonia.

Dr. Thomas J. Mays, (Philadelphia Polyclinic) gives the following list of what *not* to do in the treatment of pneumonia:

Don't believe that acute pneumonia is a self-limited disease and will get along without treatment as with it.

Don't hug the delusion that fever in any degree is a benefit to the patient.

Don't fancy that you can always tell croupous from catarrhal pneumonia.

Don't allow pain in the abdomen to draw your attention away from the chest. Frequently the beginning of pneumonia is accompanied by severe pain in the right groin, which may lead one to suspect the onset of typhoid fever.

Don't direct your treatment more towards the heart than towards the lungs.

Don't fail to recognize the great influence of the brain and nervous system.

Don't lose sight of the serious indication of rapid and laborious breathing.

Don't be afraid of applying ice to the chest in rubber bags. It will do no harm.

Don't fail to apply as many bags as are necessary to cover the area of imflammation.

Don't think that you can get as good results from a tub-bath or from cold general spongings, as you can from the local application of ice.

Don't become alarmed when the ice produces a sudden drop in the temperature and think the patient is going into collapse.

Don't fail to retain the ice so long as fever is present, and resolution has not taken place.

Don't omit to apply one or two ice-bags to the head.

Don't overlook the beneficial influence of strychnine in combating pneumonia. Administer 1-20 of a grain by the mouth every three or four hours, and besides give the same dose hypodermically once or twice a day, until the system becomes irritable.

Don't omit the hypodermic injection of 1-4 of a grain of morphine once or twice a day to secure rest and sleep.

Don't fail to administer oxygen by inhalation more or less constantly if the patient is cyanotic or short of breath.

Don't fail to bleed if the cyanosis and dyspnea are not relieved by oxygen inhalation.

Don't lose sight of the great value of tincture of capsicum in relieving great nervous depression, delirium, dry black-coated tongue, picking at the bed-clothes, etc., give it in from a half to one teaspoonful doses in water every two or three hours, or oftener, in alcoholic pneumonia.

Don't fail to give sodium salicylate, ammonium acetate, potassium acetate, and potassium citrate, three grains of each, in a dessertspoonful of peppermint-water, every three or four hours, if there is the least evidence of a rheumatic complication.

Don't overlook the important action of quinine in this disease.

Don't fail to support the patient with an abundance of nourishing food, such as milk, freshly expressed beef-juice, etc.

The Education of the Ophthalmologist.

F. B. E., in an editorial (Ophthalmic Record, October,) and in a letter (December Ophthalmic Record) makes a strong plea for the more thorough education of those expecting to take up the practice of ophthalmology as a specialty. He says: "Well balanced medical men disparage the tendency to specialism; they see in it a drift towards narrowness, superficiality and ignorant exaggeration, and insist, with reason, that the best preparation for following a specialty is a thorough education, supplemented by ten years or more of general practice."

While the years spent in general practice constitute a very important and necessary part of the preparation, it should not be forgotten that there are certain other indispensable studies peculiar to the subject, which are not mastered by any amount of general practice and which are not in any college curriculum, namely: dioptrics, light and color perception, binocular vision, ophthalmoscopy, keratometry, perimetry, etc.

The author thinks that a thorough knowl-

edge of these branches should be acquired in a preparatory course, similar to the "medical preparatory courses" in some of the universities, with additional advantages of theoretical work in small sections, "with such works as those of Donders and Landolt as guides, together with practical work in a well equipped ophthalmological or physiological laboratory."

This work is to precede the regular medical course and the ten years of general practice, because the author's experience in teaching post-graduates leads him to believe that the technical skill necessary to thorough mastery of the above mentioned studies cannot be acquired easily or successfully after the age of thirty-five.

Operation for the Effects of Gastric Ulcer.

At a recent meeting of the Clinical Society of London J. C. Wallis read notes of two cases which he had operated on for the effects of gastric ulcer. (British Medical Journal, Dec. 5, 1898.)

Case 1—A mother's help, aged 20, was admitted to the Metropolitan Hospital on March 11, 1898, for a perforated gastric ulcer. She was operated on ten and a half hours after perforation. On opening the abdomen the extravasated contents of the stomach were found limited to the gastro-hepatic area. The rent was in the posterior wall, close to the cardiac end, and nearly one inch in length. This was sewn up by two rows of Lambert sutures, and a piece of omentum was sewn over this. The abdomen was wiped out with sponges, but no irrigation was employed and no drainage was used. The patient did well for eleven days, and had no peritonitis. On the eleventh day she developed phlebitis. On the seventeenth day basal pneumonia occurred, which continued until the twenty-ninth day, when the temperature came down and she began to improve. But on the thirty-first day she vomited suddenly six ounces of blood, and died within an hour. There was no post mortem examination allowed. Dr. Wallis remarked on the cause of death by hemorrhage thirty-one days after the operation as being unusual and unfortunate. He suggested that it might be advisable in many cases to enlarge the opening sufficiently so that an examination of the interior of the stomach might be made, and that a small electric lamp would be of great service in such cases. The fact that although the peritoneum was only wiped clean and not irrigated there was no peritonitis, was in keeping with the now well-known resisting powers of the peritoneum. He had been led to adopt this method on account of the frequent occurrence of subphrenic abscesses after irrigation.

Case 2.—An unmarried lady; was seen first in July 1896. Her history dated from December, 1882, when she had an attack of gastro-enteritis, which lasted off and on until November, 1895, when, on getting out of bed she was suddenly seized with the typical signs of a perforated gastric ulcer. From this she recovered, but from that time until the operation she was unable, on account of pain, to take exercise, and was only able to take fluid food in small quantities at a time. On examination she was seen to be extremely emaciated and weak, and the abdomen was tender when manipulated, especially above and to the right of the umbilicus, where there was a distinct sense of resistance. Dr. Abercrombie and Dr. Clark saw the patient with Mr. Wallis, and it was agreed that an exploratory laparotomy should be done. At the operation a strong cord, $\frac{1}{4}$ inch broad and $1\frac{1}{4}$ inch long, was found uniting the pyloric end of the stomach to the abdominal wall. This was removed. The patient made a complete recovery after a long convalescence, and was now able to enjoy her life after fourteen years of invalidism. The pain had never returned, and she had put on flesh and was able to take exercise, and as it was now two years since the operation there were fair grounds for believing that the benefits would be permanent.

Antistreptococcic Serum.

F. J. Cotton, of Boston, (Boston Medical and Surgical Journal) states that no one will now contend that the antistreptococcic serum is, broadly speaking, effective against streptococcus infections. Beyond a doubt a certain degree of passive protection is possible in the laboratory, and probably something of the sort is possible in man. There seems, in view of recent work, no ground for drawing sharp distinctions between alleged species of streptococci, and though it would be a mistake to assume too close a parallel between the conditions of infection in man and in animals, yet probably a serum really effective in protecting rabbits against streptococci would afford some aid to the human organism in its struggle against a like infection. It is likely enough that this is the explanation of the temporary relief of symptoms so often noted. It does not seem that this represents a strong action against the infection, but it is something, and in many cases a very little may turn the tide. This seems reason enough to give the serum further trial—as a symptomatic treatment if no more. There

seems to be no good reason against its use. Urticaria, erythema, joint pains, etc., are of not uncommon occurrence, but of no great moment. Abscesses at the point of injection, sometimes containing streptococci, are not rare, and would indicate care in using a bacteriologically tested serum. If the serum is to be used in earnest it should be used in considerable doses. Probably in many cases the dosage has been too small. To protect a rabbit against a ten times fatal dose needed 0.2 céntimetre of Marmorek's serum; this is one seven-thousandth the body weight, corresponding to about 10 centimetres in man. The potency of different makes of serum varies, and they seem to lose notably by keeping. Hence while there are no accurate data for dosage in man, yet the problem is not to protect against an infection, but to cope with an infection in full swing, and that with a serum of doubtful efficacy; the needed dose will probably be large, if anything is to be accomplished. The limit of dosage must vary, but untoward effects are not frequent, and plenty of cases have borne 25 cubic centimetre doses. In one case a total of 1,030 cubic centimetres was given, though this in a case of some duration; there were no ill effects beyond a slight erythema. There seems, then, some reason for continuing the use of serum in cases of streptococcus infection. Care is needful in selecting the serum to be used; it should be used, if at all, in considerable amount; and, above all, until more evidence of its power is forthcoming, it should be used as an adjunct only, and never to supplant or modify other treatment of the case.

Tubercular Cystitis in Children.

Charles Greene Cumston (Boston Medical and Surgical Journal) says the symptom that is most prominent in children is incontinence of urine. There may be true incontinence when the urine escapes without any desire to micturate; this form is due to a certain amount of destruction of the neck of the bladder by an ulcerative process. A false incontinence varies in nature. Sometimes it is simply a micturition from overflow, in which case it is not an incontinence, but is a retention, and is met with in certain painful forms of cystitis. The neck of the bladder is closed by spasm, and from this a more or less complete retention will result. A real false incontinence is what is particularly seen in children, and is in reality a frequent and very ardent desire to pass the urine, circumstances under which children will micturate in bed at night and in the clothes during the day. The escape of the urine is voluntary, because the patient can be made to retain his urine in the bladder for a few minutes, but the desire to urinate is so imperious and constantly present that the child yields to it. Incontinence of urine from overflow may also be observed along with a more or less complete retention, this being due to spasm of the urethra. Pain as a symptom varies and often is wanting, or at least appears to be. Severe pain will make children cry, while they do not pay much attention to little dull pains or burning sensation. Hematuria appears as an infrequent symptom, and does not show itself at the beginning as it does in adults. Pyuria, on the contrary, is important in little ones, because if the urine contains pus the disease is not due to a neurosis. In exceptional cases the urine contains no pus. In all cases of suspicious cystitis a bacteriological examination of the urine should be carried out. The search for Koch's bacillus will often be negative, but should be often repeated, and finally we can, perhaps, discover the organism. We may say that the primary disease in children is curable when the lesions are not advanced. If general treatment and local application do not show any effect on the process after a reasonable trial, suprapubic cystotomy is the operation of choice, and will be followed by as good results as those obtained by it in adults.

Tuberculous Ulcers of the Rectum.

In a valuable paper, entitled "Practical Points in the Management of Tuberculosis," Dr. James T. Whittaker, of Cincinnati, Professor of Theory and Practice of Medicine, Medical College of Ohio, (Ohio Medical Journal, November, 1898) states that ulcerations of the rectum of tuberculous origin begin to granulate slowly but progressively under the use of europhen in suppository. Each suppository should contain five grains of europhen, and the agent should be inserted at bedtime. There is no difficulty of retention after the first night or two. A fistula should be split without parley. Dr. Whittaker's observations of the value of europhen in the treatment of ulcerations of tuberculous character have been confirmed by a number of other authorities. The careful investigations of Dr. Christmann undertaken several years ago shows that europhen has a powerful destructive influence upon the bacillus tuberculosis. Jasinsky (Gazeta Lekarska) employed it in cases of suppurating tuberculous ulceration in which, though other remedies as iodoform, proved useless, europhen promoted rapid cicatrization and healing in a remarkably short time. The ex-

ceedingly satisfactory results derived from the use of europhen in a case of tuberculosis verrucosa of the face by Dr. DeWitt, of Cincinnati, are also worthy of mention as illustrating the great value of europhen in the treatment of tuberculous ulcerative lesions.

The Western Ophthalmologic & Oto-Laryngologic Association.

The annual meeting of the Western Ophthalmologic and Oto-Laryngologic Association was held in New Orleans, Feb. 10th and 11th. Owing to the unavoidable absence of the president, Dr. J. Elliott Colburn, of Chicago, the first vicepresident, Dr. W. Scheppegrell, of New Orleans, presided. The joint sessions and three sessions of the Ophthalmologic and Oto-laryngologic Sections respectively were held and many important papers read and discussed.

The following officers were elected for the ensuing year: Dr. W. Scheppegrell, of New Orleans, president; Dr. M. A. Goldstein, of St. Louis, first vicepresident; Dr. H. V. Wurdeman, of Milwaukee, second vicepresident; Dr. E. C. Elliott, of Memphis, Tenn., third vicepresident; Dr. F. C. Ewing, of St. Louis, secretary; Dr W. L. Dayton, of Lincoln, Neb., treasurer.

St. Louis was selected for the next annual meeting.

The following names were added to the list of honorary members: Dr. Geo. Stevens, of New York; Dr. St. Clair Thompson, of London; Dr. R. Coen, of Vienna, Aust.; Dr. E. J. Moure, of Bordeaux, France; Dr. J. Sendziak, of Warsaw, Russia: Dr. Marcel Natier, of Paris, France; Dr. C. Zien, of Dantzig, Germany; Dr. A. A. Guye, of Amsterdam, Holland.

The new members elected were as follows: Dr. J. A. Caldwell, of McKinney, Tex.; Dr. O. Joachin, of New Orleans; Dr. W. H. Baldingor, of Galveston, Tex.; Dr. J. S. Mott, of Kansas City, Mo.; Dr. J. S. Litchtenberg, of Kansas City, Mo.; Dr. J. W. Bettengen, of St. Paul, Minn.; Dr. J. W. Chamberlin, of St. Paul, Minn.; Dr. H. M. Starcky, of Chicago; Dr. R. Brunson, of Hot Springs, Ark.; Dr. Max Thorner, of Cincinnati; Dr. J. W. Scales, of Pine Bluff, Ark.; Dr. E. M. Singleton, of Marshalltown, Ia.; Dr. F. C. Eving, of St. Louis.

The Male and Female Skull.

M. Le Bon, the distinguished French scientist, in a new book entitled "The Psychology of Nations," has some curious things to say about progress. He apparently does not think that there is any sign of women becoming the equals of the "superior sex." He says: "The differentiation of individuals brought about by the development of civilisation is also apparent in the case of the sexes. Among inferior peoples or the inferior classes of superior peoples the man and the woman are intellectually on much the same level. On the other hand, in proportion as peoples grow civilised the difference between the sexes is accentuated. The volume of the male and female skull, even when the subjects compared are strictly of the same age, height, and weight, presents differences that increase rapidly with the degree of civilisation. Very slight in the case of the inferior races, these diferences become immense in the case of the superior races. In them the feminine skulls are often scarcely more developed than those of the woman of very inferior races. Whereas the average volume of the skulls of male Parisians is such as to range them among the largest known skulls, the average of the skulls of female Parisians classes them among the smallest skulls with which we are acquainted, almost on a level with the skulls of Chinese women, and scarcely above the feminine skulls of New Caledonia."

Report of Treatment of Secondary Anemias, with Cases.

J. A. Stoutenburgh, M. D. says: These anemias accompany or follow other abnormal conditions, and play an important part in their course. If not relieved, they prolong the original attack, and when convalescence is finally established, leave the patient a shining mark for those infectious diseases which claim for their victims those whose resistive power is below the normal standard.

In most anemias the blood is diminished in volume, the corpuscles in number and the hemaglobin sometimes falls to less than half the normal percentage. As a result the oxygen-carrying power of the blood is impaired, tissue metamorphosis retarded and nutrition of the whole body suffers in proportion to the degree of the anemia. There is loss of appetite and constipation, and the work of living is but lazily done.

Treatment.—First. Regulate the bowels; for this podophyllum in small daily doses is effective. Second: cause patient to drink freely of good water, boiled preferred, taking a glassful hot three-quarters of an hour before each meal. This fills up the circulation and facilitates excretion of waste products. Third: give appropriate treatment for the original disease, and Fourth: we need a remedy or combination of them that will increase the oxygen-carrying

power of the blood, increase the appetite and stimulate the stomach and intestines to renewed activity.

Many so-called blood-makers attempt to do too much for us by supplying pre-digested and artificial food. It is better to give nature a chance, by coaxing her to resume her work, and then furnishing a nutritious and easily digestible diet.

Gray's Glycerine Tonic Compound is a preparation meeting the fourth requirement, and it has done me excellent service in many cases besides those here reported. It is made by the formula of Dr. John P. Gray, a combination of sherry wine, phosphoric acid, gentian, taraxacum, glycerice and aromatics.

The following cases from my note-book will best illustrate my points:

Case I. Mary P——, age 24, seen first June 11, 1897.

History.—Had several attacks of malaria during fall of 1896, intermittent and remittent types; suffered two severe attacks of bronchitis during February and March, and had malaria again in May. Has been sick now six days.

Examination shows a profound anemia, rapid and very small pulse, temperature varying from 99.6 deg. to 103 deg., as shown by later observations. Diagnosis, remittent malarial fever and anemia.

Treatment began with calomel, followed by quinine in doses of 5 grains every hour for four hours each morning, and small doses of podophyllin at night, plenty of boiled water, aud a liquid diet rich in nitrogenous elements. Fever continnes one week, but being convinced that anemia was partially responsible for it, on third day ordered Gray's Glycerine Tonic Compound in half-ounce doses every four hours before taking food. This was continued four days with quinine as above, when temperature was normal. Now put on full diet, tonic continued before meals and quinine gr. ii. after meals. Treatment continued ten days, when patient reported a gain of four pounds, great increase in strength and growing appetite; pulse strong, appearance much improved. Tonic continued ten days longer, when a fine color and strong pulse evinced perfect health.

Case II. Margaret G——, aged 36, widow, first seen May 17, 1897. Took cold in March, had a constant cough, lost appetite and flesh, constipation and has sweats and fever. Has taken several preparations of cod-liver oil, iron, hypophosphites and various cough mixtures without material relief.

Examination—Roughened bronchial respiratory murmur, small moist ráles over left apex, some dryness and fine whistling ráles over right; no dullness elicited; anemic murmur at base of heart; pulse soft, 100; expectoration scant, glairy.

Treatment.—For bowels, same as Case I., boiled water to be drunk freely, and a mixture containing codeine one-sixth grain, and beechwood creosote m.i in 3i of strong syrup of ginger, to be taken every four hours to relieve cough. Gray's Glycerine Tonic Compound was begun at once, taken after meals on account of irritable stomach.

May 27.—Cough slight, no expectoration or sweats, sleeps and eats well; auscultation-respiratory sounds much improved, a few moist ráles over left apex, Codeine mixture given twice a day. Tonic continued.

June 7.—All symptoms have disappeared; examination negative; pulse strong, condition excellent, although she is supporting herself and children by hard work.

Case III. Annie V——,aged 23, married, first seen June 23. Aborted at the third month, two weeks ago. Had profuse hemorrhage then, and it has continued in varying quantity to date; is thin and pale, has fever, sweats, severe headache and pelvic pain.

Examination showed enlarged, tender uterus, with sanguino-purulent discharge· pulse 120,small and soft,mucous membranes very pale. Diagnosis, sepsis and anemia following abortion and hemorrhage.

Treatment.—Thorough curretting with gauze drainage, changed every second day after irrigation with normal salt solution. The glycerine tonic and quinine were given as in latter part of Case I. In one week the temperature was normal, no tenderness or pelvic pain, general condition much improved, tonic continued before meals to aid digestion. On fifteenth day patient said she was almost as good as new; appetite splendid, digestion and assimilation perfect. Patient discharged cured July 13, having gained nine pounds in twenty days.

Case IV. Mary M——, 42, widow, first seen June 5, 1897. Was operated on for fibroma uteri one year ago, ovariotomy and partial hysterectomy being done. Since then has suffered constantly with stubborn constipation, anorexia and indigestion. Of late has had constant headache; cannot retain food, bowels not moved for six days, has distension of abdomen coming on every afternoon, accompanied by intense pelvic pain.

Examination showed marked anemia, tympanites, bowels loaded and a fibroid reaching half-way to the navel and nearly filling hollow of sacrum.

Treatment.—Enemata to clean out bowels; copious drinking of hot water; liquid diet;

hot stoups for pain. Improvement is rapid. On the third day retained food. Gray's Glycerine Tonic Compound in tablespoonful doses, well diluted, was given before meals and quinine gr. 2 afterward; food gradually increased. On the fifth day bowels moved naturally, distension ceased and appetite improving. One week latter was much better; good appetite, bowels moving daily; is now doing her own work. She drank hot water before meals and continued the tonic for two weeks longer, when she reported that she was in better health than for years, and had gained eight pound since beginning treatment.

These are some of the cases in which I have used this new restorative with the best satisfaction. I am well satisfied that we have in this tonic a most valuable medium, one sure to grow in favor as its merits become better known.

Diet in Acne.

The regulation of the diet in this troublesome and so often obstinate affection, is now generally admitted to be the most important element in the treatment of the disease. Patients themselves will usually have been trying various dietary experiments along with the ordinary home remedies before consulting a physician. Unless, however, the most explicit directions are given as to the proper diet, serious mistakes will be made by patients in the selection of foods, and especially as to its quantity. As Dr. Jackson says, in his Manual of Diseases of the Skin:† "The well-to-do are prone to eat too much, and it is remarkable how rapidly their acne will improve by reducing their diet to the simplest elements. In many of them a milk diet, provided milk agrees with them, will accomplish a marked benefit." On the other hand, many young girls almost starve themselves, entertaining the mistaken idea that a low diet will give them a fine complexion. Nothing could well be less true than this. Especially is there a prejudice against butter. The old explanation that skin eruptions were mainly due to the use of too much butter still remains absolutely true for most non-medical people, and even for some medical men. That butter should be used freely, and that codliver oil and iron should be the only drugs required in many cases, as Dr. Jackson insists, would, to these good old conservatives, seem rank heresy. It is evident that more definite ideas as to the diathesis that underlies the etiology of acne have been acquired, and that the dietetic management of it rather than any empiric use of vaunted specifics constitutes the most modern therapeusis of this extremely frequent and bothersome condition.

†From advance sheets of the third edition of a Ready-Reference Hand-book of Skin Diseases, by George Thomas Jackson, M. D. Lea Brothers & Co., Publishers.

Modern Treatment of Hæmorrhoids.*

Valuable progress has been made in recent years in the local therapeutic treatment of hæmorrhoids. Hitherto, the practitioner had found himself in an uncomfortable position regarding these troubles, not only in the treatment of newly-formed hæmorrhoids but in chronic cases more or less developed, even up to large venous knots hanging from the rectum; in reality, he had no remedies at all at his disposal to satisfy the expectations of the patient, which constitute an early and lasting ceasing of the pain and an ultimate disappearance of the disease.

We may prescribe a strict diet, bodily exercise, cold or luke-warm sitz-baths, and massage, we can administer laxatives and suppositories containing narcotics, &c., but all these give only temporary relief, or, in the case of narcotics, a quickly-passing stupefying effect, following which the pains are more severe. Besides, all these precautions are not always carried out by the patient with the necessary perseverance, especially seeing that hæmorrhoids appear more frequently in that class of people who have always been accustomed to good living and cannot readily adapt themselves to a simple diet and mode of life.

Moreover, all these precautions cannot be carried out in practical life, however willing the patient may be, in persons whose occupation compels a sedentary mode of life, and who suffer from plethora of the abdominal organs, as it would necessitate neglecting their business.

In cases of hæmorrhoids of the size of a pea, walnut, or more, the spontaneous bleeding of which brings temporary relief. the medical attendant can with good reason get rid of the patient by telling him that such swellings can only be removed by extirpation, for which operation a surgeon must be consulted.

If the patient follows this advice, a great service is not done the surgeon by asking him to perform an operation, because hæmorrhoidal operations, owing to the uncertainty of result and mode of performance, are not very pleasant or satisfactory.

If, however, the patient, as is mostly the case, greatly fearing the knife, does not consult the surgeon, then the family physi-

*Dr. R. Timmermann, Hanover.

cian has to put up with complaints and reproaches of the patient, and at last, *nolens volens*, opium or belladonna preparations in increasing doses have to be resorted to as an ultimatum. In short, the medical man had no remedy which was capable of allaying the pain within a few hours, and at the same time check from the moment of treatment the formation of new hæmorrhoids, thereby effecting a cure. The practitioner, as well as the layman, will only be too pleased that a remedy introduced a short time ago has proved of such value as a therapeutic local remedy in such cases, that it can be described as a specific for hæmorrhoids. This medicament is a combination of bismuth with iodo-resorcin sulfonic acid, and which, owing to its specific effect upon the mucous membrane of the rectum in various conditions, is briefly called Ansuol.

Its effect is manifold: it acts upon suppurating, secreting, or moist surfaces, drying up and limiting the secretion; it is a very powerful disinfectant and deodorant, as well as an astringent, these properties explaining the strong action of Anusol in causing granulation and consequent healing of sore parts; and, furthermore, Anusol acts in a most suitable manner, when combined with other substances, in the treatment of hæmorrhoids, as it relieves constipation and removes any hardened fæces, causing a slippery, pappy, and painless stool. The combined action of these various properties is the cause of the great success of Anusol in the treatment of hæmorrhoids—as has been reported by numberless patients—even in most severe cases of many years' standing. This success will induce practitioners, when treating hæmorrhoids, to adopt a much simpler and satisfactory method than hitherto. Previously the physician tried to remove the originating cause of the disease by regulating the diet, by advising a suitable mode of living, and by creating a more active circulation of the blood, more especially in the abdominal organs. Often we succeed—although only partly, sometimes even after weeks or months—in removing the unpleasant symptoms; but even in such cases we frequently had the sad experience that, owing to some little deviation from instructions, although probably done quite unintentionally, the old pains suddenly recurred in a much more severe form. On the other hand, the exact following out of instructions and the employment of internal and local remedies had no effect whatever. The method now adopted is a different one: we still attach much importance to our instructions being carried out regarding the general mode of living, diet, &c.; but the experience of many years has taught us that success largely depends upon our efforts in treating the local symptoms, disturbing the ordinary mode of life of the patient as little as possible. This local treatment is an extremely simple one, and consists in the employment of Anusol suppositories.

The iodo-resorcin sulfonate of bismuth (Anusol), which is absolutely non-toxic, and when not incorporated with a fatty basis is readily decomposed when exposed to air and light, is made into suppositories in combination with Zinci: Ox: as an adjuvant and Cocao Butter and Ung: Cereum as constituents, and is only supplied in the form of suppositories. The following has proved to be the best formula:

℞ Anusoli,..... grs. 112.
Zinci Ox.,.....grs. 90.
Balsam Peru,.....grs. 22½.
Cocao Butter,..... ʒv.
Ung. Cerei,.....grs. 40.
M. Fiat suppositoria No. 12.

One suppository should be inserted into the rectum, above the sphincter, each evening, or in chronic cases morning and evening. If the hæmorrhoids are external, a portion of the suppository should be well rubbed into the parts; and the remainder of the suppository introduced into the rectum. If the bowels are moved within half an hour after the introduction, the effect is somewhat nullified, and hence another suppository should be introduced. Although the suppositories do not contain any narcotic, the pain is greatly relieved, even after the first suppository; and after prolonged use (one or two dozen suppositories) in almost every case the whole of the troublesome symptoms had disappeared. Of course the treatment is assisted by keeping to a simple and suitable diet, avoiding stimulating foods (strong coffee, alcohol, &c.) and sitting on damp or cold places, without, however, incommoding the patient by any radical changes in his diet or mode of life.

The most important point is the local treatment. Should there be at any time the slightest sign of recurrence, then the immediate employment of the suppositories will be found, in most cases, to absolutely remove the disease.

When we consider that women when pregnant and after parturition are often troubled with hæmorrhoids, constipation, and painful evacuation of the bowels, and that Anusol can be given to anybody under all conditions without the slightest ill-effect, this remedy must be considered of great and useful help to the medical man in the treatment of such affections. Anusol suppositories are valuable not only in the treatment

of hæmorrhoids, but have also been successfully employed in many other diseased conditions of the rectum, its mucous membrane, and external surrounding skin, seeing that in cases of constipation, and all kinds of painful evacuations of the bowel, in intestinal tubuculosis, enlarged prostate, &c., a painless, pappy evacuation takes place. In fissure of the anus and catarrh of the mucous membrane of the rectum these suppositories often effect—as a result of the aforementioned therapeutic properties—a radical cure. Again, their action is very prompt in cases of oxyuris vermicularis in children and adults, and in cases of painful pruritus vaginæ. In all cases of sores of the external skin, be it in infants or adults, in prurigo, intertrigo, &c., Anusol, when rubbed into the affected part in suppository form, is a safe and never-failing remedy.

A great advantage of Anusol suppositories is that they can be had ready-made for use, which saves the chemist the unpleasant task of making the suppositories and the medical man the trouble of writing out a full prescription. He would simply have to prescribe as follows:

℞ Supp. Hæmorrhoidale Anusoli,..No. 12.

Sig.—One every evening (in severe cases, morning and evening) to be inserted into the rectum; or, the sore part to be rubbed with the suppository three times a day.

Of the numerous favorable medical reports which have appeared on the subject, that of Dr. Altschul's on "The Etiology and Therapy of Hæmorrhoids," read in the Aeztliche Verein at Frankfort, November, 1896, and published in the *Deutsche Medicinal Zeitung*, November, 1897, should be mentioned.

Dr. Altschul, who has himself suffered from hæmorrhoids for twenty years, and has in his own interest tested many methods of treatment on himself, says, at the end of his paper, after having explained the various dietetic methods of treatment (*loco citato*):—"Hantel pessaries, which have been recommended by others, have been prescribed by me in some cases, but no patient showed sufficient perseverance to wear them for any length of time; I will, therefore, not give a conclusive judgment upon them. A disadvantage which cannot be obviated with them is the removal of the flatus which is generated when they are worn. With these pessaries it is possible in medium cases, not to cure them, but to make life bearable and more comfortable. This I have personally experienced. Unfortunately, during the spring I did not keep to the dietetic and other limits imposed, and the consequence was a re-appearance of the venous knots, with tenesmus and itching. I hoped to derive benefit by climbing whilst staying in the mountainous district; however, unfavourable weather did not allow me to carry out my intentions, and only on my return home could I again resume the usual restricted mode of living. The improvement was despairingly slow, when I casually heard of Anusol suppositories. The first trial with four suppositories was without success, and it was with difficulty that I could be induced to make another trial. I ultimately, however, used them for four days—two suppositories per day, and then for a further four days, applying only one suppository per day. The result was completely successful. Since that time (two months ago) I have complete comfort, only after defecation having to replace—as I have done for years—the prolapsed anus. Upon this last occasion I had been troubled for four months, and attribute the satisfactory cure entirely to the Anusol suppositories. Since then I have prescribed them for a large number of patients, and all found great relief of their troubles, although not to the extent that I did. It seems to have no effect upon hæmorrhage. The effective agent in the suppositories is a new chemical preparation called iodo-resorcin sulfonate of bismuth. I have never heard of any toxic or harmful by-effects."

This case is almost typical. On the one hand, we observe that no method has hitherto given the patient complete rest, and that the old pains recur immediately after the slightest irregularity in the mode of living or diet; on the other hand, we observe the almost astounding success which followed the employment of these suppositories when used as prescribed, giving as they did complete rest and comfort for over two months.

We have in Anusol a most valuable addition to our materia medica, which is a great help to the medical man, owing to the simplicity and safety of its employment, and will prove a blessing to the large number of people who are troubled with hæmorrhoids. —*The Therapist.*

Evidence in Favor of Vaccination.

The action of the English Government with regard to vaccination has stirred up its supporters in all parts of the world, and scarcely a day passes that does not bring overwhelming proof testifying to its efficacy. Pediatrics in one of its recent editorials thinks that this temporary set back in England will be for the ultimate good of the cause, by arousing the upholders of vaccination from their lethargy, and by welding them together in a solid mass, and lastly, by improving the methods of opera-

tion. In a recent lecture, delivered at Rome, Dr. Bizzozzero made an able and impressive argument in favor of vaccination. He referred to the immense benefits that the re-vaccination law of 1874 had conferred on Germany by controlling the ravages of small-pox. In 1871, with a population of 50,000,000, she lost 143,000 lives by small-pox, whereas through the effective working of the law of 1874 the mortality decreased at such a rate that now the disease claims but 116 victims in the year. Professor Bizzozzero goes on to say: "If it were true that a good vaccination does not protect from small-pox we ought to find in small-pox epidemics that the disease diffuses itself in the non-vaccinated countries. But it is not so. In 1870-71, during the France-German war, the two people interpenetrated each other, the German having its civil population vaccinated optionally, but its army completely re-vaccinated, while the French (population and army alike), were vaccinated perfunctorily. Both were attacked by small-pox, but the French army numbered 23,000 deaths by it, while the German army had only 278; and in the same tent, breathing the same air, the French wounded were heavily visited by the disease, while the German wounded, having been re-vaccinated, had not a single case. No more convincing testimony of the good wrought by vaccination has ever been adduced. Compulsory vaccination should be in force in every country of the world, and ignorant parents or parents with a crank should not be allowed to endanger the lives of their young children or imperil the health of the public at large. The principle of freedom may be carried too far.

High Temperature and Prognosis of Pneumonia.

Donier, according to the British Medical Journal, has studied the question of high temperature and prognosis in pneumonia. Some of the observations which he quotes were received by him from Friessinger. From his investigations he comes to the conclusion that in some cases of pneumonia a high temperature is of good rather than of bad omen. In some cases he observed temperature ranging from 41.0 deg. to 42.4 deg. C. In these cases the mortality reached 13.3 per cent., while in cases in which the temperature varied between 39.5 deg. and 41deg. C. there were 19.85 per cent. deaths, while in those between 38 deg. and 39.5 deg. C. the mortality was as high as 23.07 per cent. The point of importance in these cases is to note the character of the pulse in conjunction with the temperature. A high temperature with a good pulse denotes that although the disease is severe the tissues are reacting to it, and that probably it will exhaust itself in a short time. When however, the pulse is rapid and the temperature high, it shows a less resistive power in the economy. On the other hand, should the temperature be considerably lower—38 deg. C., and the pulse rapid—it points to a severe degree of infection and little or no reaction on the part of the tissues. Thus, high temperature in pneumonia is not necessarily an alarming symptom, and many such cases do extremely well.

Massage of the Abdomen.

Reed (Medical News) recommends massage of the abdomen in the following conditions: "(1) Chronic gastritis in all its forms, excepting those accompanied by hyperchlorhydria. (2) Anacidity or subacidity, except when dependent upon acute gastritis or carcinoma. (3) Gastroectasia, not dependent on cancer. (4) Atonic conditions of the stomach walls, whether progressed to the stage of dilatation or not. (5) Displacements of the various abdominal organs, including (*a*) gastroptosis; (*b*) nephroptosis, except in cases where the displaced kidney has become excessively tender on pressure; (*c*) enteroptosis. (6) Chronic intestinal catarrh, not complicated with deep ulceration. (7) Dilatation of the intestines. (8) Constipation from unknown causes. In many such cases massage succeeds. (9) In a group of symptoms which comprise especially tenderness over a region three or four inches in diameter, including the umbilicus as its center, and a marked pulsation of the abdominal aorta in the entire epigastric region.

"These symptoms have been assumed to denote congestion of the solar plexus. They are often met with in practise, and may be the results of autoinfection from the gastro-intestinal tract. They are usually benefited by gentle kneading of the abdomen in connection with careful attention to diet. The following are the principal contraindications for massage of the abdomen: (1) Ulceration in any part of the stomach or intestines; (2) cancer or any of the abdominal organs; (3) acute inflammation in any part of the gastro-intestinal tract; (4) hyperchlorhydria; (5) prolapsed kidneys which are acutely sensitive to palpation; (6) aneurism of any of the abdominal or thoracic arteries; (7) during the menstrual period, when the flow is excessive,or when there is a tendency to menorrhagia. In fatty degeneration or marked dilatation

of the heart and advanced phthisis, especially with a tendency to hemoptysis, abdominal massage should be practised—if at all—with much care and gentleness."

How to Avoid Tuberculosis.

Tucker Wise, M. D., (Medical Record,) summerizes the precautions against tuberculosis, as follows:

A generous dietary of nitrogenous food.

Free ventilation of dwelling—and sleeping-rooms by open windows, with wire gauze blinds.

Adequate house-heating in winter.

Boiling of all milk and cream previous to use.

Try to obtain eight hours' sleep every night; if not sound sleep, contract the hours to seven, and rest in the day.

If debilitated, with weak digestion, take a rest in the recumbent position a quarter of an hour before and after meals.

Wear the loosest clothing possible, especially around the waist and ribs, to afford absolute freedom in respiration.

Take systematic daily exercise in the open air on foot.

If means and station in life admit of a long holiday from time to time, live during fine weather in a tent in the open air or in a summer-house for most of the day; and if unemployed, pursue a hobby to occupy the mind.

The Bacterial Origin of Biliary Calculi.

Mignot (British Medical Journal) states even those who, owing to the discovery by Gilbert and others of living bacteria in the centre of biliary calculi, believe that bacteria are the exciting cause, generally consider that a diathesis is a necessary predisposing cause. This, however, is a mistake. The author has succeeded in producing typical calculi in guinea-pigs and has obtained the following results: (1) Foreign bodies when introduced into the gall bladder can stay there for an indefinite time, provided they are aseptic, without causing inflammation or precipitating the solids from the bile. (2) Foreign bodies previously impregnanted with virulent microorganisms causes a more or less intense cholecystitis and precipitate the solids from the bile. As long as the bacteria retain their virulence, however, they cannot form a calculus, but only a sediment mixed with pus. This precipitate has no tendency to cohere or to adhere to foreign bodies. (3) Mignot then shows why previous attempts to form calculi have failed. The bacteria must be attenuated, not virulent. This is best attained by growing them for some months in bile to which constantly decreasing amounts of broth are added. When sufficiently attenuated they are no longer pathogenic when injected into the cellular tissue of animals. By injecting these into the gall bladder stones are occasionally formed, but more often the bacteria are washed out into the intestine. If, however, a foreign body, especially if porous, such as cotton wool, be placed in the bladder and fixed to its wall to prevent expulsion, a stone is formed around it with the greatest certainty. Five or six months are required for the formation of a perfect calculus. The kind of bacteria injected seems to be of quite secondary importance. Mignot has proved that the typhoid bacillus, the B. coli, staphylococci, streptococci, and even the non-pathogenic B. subtilis, are capable of giving rise to calculi, and probably a great number of other organisms are equally so.

The Diagnosis between Tubercular Syphilis of the Tongue and Syphilitic Glossitis.

The Laryngoscope gives the following. Tubercular syphilis of the tongue: 1. Begins in the submucous connective tissue, which corresponds to the *rete mucosum* of the skin. 2. Spreads from the center towards the surface, deforming and atrophying the papillæ. 3. Profoundly deranges the disposition of the elastic fibers and of the muscular elements, which disappear, leaving no trace. 4. Has clearly defined limits. 5. Has an origin, a stricture and a anatomical seat which do not differ from those of cutaneous tubercle. 6. Shows no tendency to the formation of giant cells. 7. Presents vascular alterations consisting of proliferation and detachment of the endothelium and infiltration of the external tunic without evident traces of an endarteritis. Syphilitic glossitis on the other hand:

1. Has a point of departure notably deeper and more exactly in the muscular parenchyma. 2. Has no defined limits, and easily invades the entire organ. 3. Presents an exuberance of the mucous epithelium, which sends irregular processes into the corium. 4. Consists in its inflammatory process of the same morphologic elements as tubercular syphilis, with giant cells in addition. 5. Shows evident new formation of connective tissue. 6. Comprises a newly formed connective tissue of intricate disposition, which imparts a very considerable resistance to the organ. 7. Produces deformity, e. g., lobulation or fissures of the surface, resulting either from

loss of substance by ulceration or from contraction of the newly-formed connective tissue.

Drug Addiction.

Dr. J. H. Kellogg, in a recent paper, makes the following clear distinction: (Medical Record, Jan. 14, '99).

"The majority of persons who acquire the disease of drug addiction are peculiarly constituted individuals, who may be divided into two classes, as: (1) Those who live upon the sense plain, regarding the body as a harp of pleasure, to be played upon so long as its strings can be made to vibrate by force of will or the aid of artificial excitements, and who, when the natural resources of the body are exhausted, seek artificial and unearned felicity through the aid of various nerve-tickling, pain-and-trouble annihilating, felicity-producing drugs. (2) Those hypersensitive, neurotic, delicately organized individuals, a rapidly increasing class, who are the natural result of the artificial, brain-and-nerve-destroying and race-deteriorating conditions of our modern life. These persons, lacking physical capacity for enduring the pains, hardships, and tribulations of life, from which they suffer untold and indescribable agonies, seek relief in some nepenthe, which promises them ease from the present stress of suffering, overlooking all considerations respecting what the future may have in store for them."

The Use of Crede's Silver Ointment in Puerperal Sepsis.

At the meeting of the New York Academy of Medicine, Section on Obstetrics and Gynæcology, Jan. 26, 1899, Dr. S. Seabury Jones read a paper on the use of Credé's silver ointment in puerperal sepsis. (Medical Record, Feb. 11, 1899.) The author said that Dr. Tracy, registrar of the New York City Board of Health, had kindly furnished him with the statistics as to the number of deaths from puerperal septicæmia, grouped in periods of five years, from 1866 to the present time. These figures, together with the fact that last year, in the boroughs of Manhattan and the Bronx, there were 376 deaths from all puerperal diseases, indicated that there was much yet to be done in the line of making childbearing more physiological and less pathological. These statistics, of course, left entirely out of consideration the large number of cases of puerperal sepsis in which life was not sacrificed, though much damage might have been done.

In spite of the brilliant results claimed to have been secured in Credé's clinic by the use of the new silver salts, the literature of the subject in this country was still very meager. The reader of the paper then proceeded to review the literature, calling special attention to the researches, in this country of Carey Lea on allotropic silver. What he described as "gold-colored, allotropic silver" appears most nearly to correspond with Credé's soluble silver. Lea says that it was soluble in water, and that when heated on platinum it was converted into ordinary silver. It occurred in small, hard pieces, having a greenish metallic luster, but when subjected to trituration it became pasty and assumed a yellow tint. Credé used a 15 % ointment containing soluble, uncombined metalic silver. He estimated that of the three grams which he recommended for the initial inunction, about 4½ grains of pure silver were absorbed into the system. This investigator used the ointment only in well observed cases in which the diagnosis of severe septic infection was clear. In local processes the inunctions were made as far from the seat of disease as possible. He found that in acute and recent cases one inunction was usually sufficient to effect disinfection of the system in from twenty-four to thirty-six hours. Improvement was usually observed in from three to ten hours—indeed it was so sudden as to astonish both patient and physician.

The Alleged Heredity of Consumption.

There is no doctrine more firmly impressed on the mind of the average director of a life assurance company than the hereditary transmission of consumption. Yet, like other cherished beliefs, this doctrine, says the British Medical Journal, is being attacked on all sides, and if it is to remain as one of the fundamental principles of life assurance, fresh statistics must be collected so as to confute the statements confidently made by its opponents. The discovery of the tubercle bacillus and the confirmation of the infectious nature of consumption has thrown quite a new light on some of the questions connected with the transmission of this disease. The old statistics, which simply stated the number of consumptive persons who came of a consumptive parentage, will not now suffice to convince any thoughtful physician that the disease is transmitted by inheritance. There can be little doubt that in many of the so-called cases of transmitted phthisis the patient acquired the disease by contagion, his powers of resistance to the bacillus being enfeebled by the same conditions of environment as led to his father or mother being affected. In order, therefore, to prove that consump-

tion is inherited, it will be necessary to show that the children of consumptive parents when removed from the influence of the paternal environment succumb to the disease to a greater extent than do the general population.

Relation of Pelvic Disorder to Mental Disease.

C. K. Clark, (Albany Medical Annals, January, 1899,) states that for some time in that Province a war has been waged on the subject of gynecological operations as a cure for insanity. The enthusiasts, on one side, claim that practically all insane women have pelvic disease; the opponents of this theory insist that pelvic disease is an unimportant factor in the development of insanity. His experience has been that it exists in a small proportion of patients, and of those in whom it does exist a majority do not require surgical aid. In those upon whom he has operated surgical results have been excellent, but the result on the mental condition has been generally disappointing and in some instances harmful. Pelvic disease no doubt accounts for a small proportion of cases of insanity, and when it exists should receive appropriate treatment.

"We have nothing to say against operations of any kind being performed on the insane, for just the same reasons that make operations on the sane advisable or necessary, but we protest against the removal of uterine appendages for any other reason. The day of indirect treatment for mental and moral deficiencies by heroic operations has gone by. Attempts in this direction have been made from time to time, but comprehensive psychology and good sense have hitherto triumphed and will continue to do so."

The Surgery of Perforation in Typhoid.

Cushing (Johns Hopkins Bulletin,) reprots 4 cases. In the first perforation occurred at the end of the second week. The abdomen was opened, and the perforation closed by suture; the peritoneum was drained. Three days later a fæcal fistula developed from a second perforation, but closed spontaneously. Seven days later there were no symptoms of perforation. Once more abdominal section was performed, no perforation found; two days afterwards laparotomy was again needed for acute intestinal obstruction caused by adhesions about the second perforation. This obstruction was relieved, and the perforation closed. The patient, a boy aged 9, recovered. The second case occurred in a boy aged 18. Perforation took place in the fifth week. The patient was very ill; laparotomy was undertaken under cocaine anæsthesia. There was general peritonitis and free extravasation of liquid fæces. Three perforations were discovered and sutred; all lay in the ileum. The patient died in four hours. The patient in the third case was a negro, aged 31. After prolonged abdominal symptoms perforation occurred at the end of the fourth week. General streptococcic peritonitis was found, the perforation was sutured, and Douglas's pouch drained with gauze. The patient died at the end of eight hours. The fourth operation was undertaken under an error of diagnosis. Symptoms of perforation set in during the fourth week, the fever had relapsed. The patient was a girl aged 15. Sudden pain seized her, with vomiting and distension. Abdominal section was performed. There was no free fluid in the peritoneum, which was not even injected; the appendix and intestines were free from adhesions. The Peyer's patches in the ileum were swollen and hard, feeling like buttons. The pelvic viscera and lumbar glands, the gall bladder and the great veins of the pelvis and abdomen were apparently free from lesions. No ill-effects followed the operation, and the relapse subsided.

Rebellious Constipation Cured by Massage of the Gall-Bladder.

Berne has found that in certain patients massage of the gall-bladder gives almost as good results in overcoming constipation as massage of the whole abdomen. (Medical News, Feb. 4, 1899.) In some patients massage of the whole abdomen is contraindicated, as in the presence of an abdominal tumor, or an excess of adipose tissue, or a particularly sensitive skin, as well as in young women in whom the close association of the pelvic and abdominal organs, make general abdominal massage undesirable. Moreover, constipation is often due to sluggishness of the biliary flow, and massage over the gall-bladder corrects this. The operator sits at the right side of his patient, and makes deep, gentle plunges with his fingers from below the false ribs upward toward the under surface of the liver. Ten minutes of this exercise, three hours after the midday meal, and repeated daily for ten or twelve days, will suffice to bring about a normal passage without the help of drugs. From thirty to forty days are required to effect a permanent cure. The passage of bile into the intestine is shown by the restoration of the normal color of the stools, and the disappearance of their fetid odor, while the body of the patient regains its natural embonpoint.

Hypertrichosis.

There are few chronic diseases that give rise to more real discomfort than this cosmetic defect. Numbers of doctors have almost piteous appeals from female patients on whom the development of a hirsute facial appendage is a source of as much worriment as it would be of joy to their young male relatives. So many different methods have been employed for its removal in the past, and so many exaggerated claims made for each new method, and yet recurrence has been the rule, that the ordinary general practitioner is apt to doubt that there is really any effective lasting method of depilation, and so advises his patients against attempts at relief.

The electrolytic method of removing the superfluous hairs of Trichiasis—the invention and practical development of which, by the way, we owe entirely to Americans, has been now before the profession nearly a quarter of a century. It has been generally adopted in Europe, and especially in Paris is used extensively and with the best satisfaction. "The question is often asked," says Dr. Jackson, in his 'Manual of Skin Diseases,"* "is the removal of the hair by this method permanent?" This question may be answered: "It is without a shadow of a doubt." The answer has the advantage of being definitely decisive, something that is not always characteristic of therapeutic suggestions, especially in skin diseases. With the refinements in the use of the electrolytic needle that twenty-five years of practical experience with it have given, the depilation is now almost invariably successful from the beginning, and a new growth of hair afterwards is an anomalous irritative hyperplasia which is extremely rare, or a sign of failure to destroy the hair bulbs completely at first. The danger of scarring is also reduced to a minimum, and with reasonable care the cicatrization will never be more than the minutest points on the skin, and seldom will be noticeable at all. There would really seem to be very little reason any more for sensitive people to suffer the discomfort they usually do because of the persistent presence of this undesirable hirsute adornment.

Doctor—That's a bad razor cut in your head, Rastus. Why don't you profit by this lesson and keep out of bad company? Rastus—Ah would, doctah, but Ah ain't got no money toe git er divorce.

*From advance sheets of the third edition of "Jackson on Diseases of the Skin."—Lea Brothers & Co., Publishers.

READING NOTICES.

Clinical Experience Showing the Physiological Action of Mercauro and Arsenauro.

Liq. Auri et Arsenii Bromidi—Arsenauro—Strength 10 minims (0.6 c.c.) contains 1-32 gr. each (0.002 gm.) Bromide of Gold and Bromide of Arsenic.

Liq. Auri et Arsenii et Hydrargyri Bromidi—Mercauro—Strength 10 minims contain (0.6 c.c) 1-32 gr. each, (0.002 gm.) of Bromide Gold, Bromide Arsenic and Bromide Mercury.

Originated and recommended by Dr. Barclay.

Physiological Action—Digestive System.—Five to ten drops of either of these solutions largely diluted with water stimulate the flow of gastric and intestinal juices and augment peristalsis, improving the digestive and nutritive functions. In atony of the gastric tubules in children and adults Mercauro and Arsenauro are invaluable.

Circulatory System.—Cardiac action may be slightly stimulated by the doses mentioned—so far from being deleterious, it actually tends to invigorate the system—increasing the number of red blood corpuscles and prevents their destruction in such diseases as Chlorosis and Anæmia.

Nervous System.—The general effect of Arsenauro and Mercauro on the brain and nervous system is that of a tonic—a property which is supposed to explain their antiperiodic nature, in which respect quinine alone is their superior.

In very large doses, 60 to 80 drops, the cerebral functions were stimulated, even to the point of exhiliration. Experiments have shown that the sensory nervous apparatus is strongly affected. This action finally involves the motor system.

Medicinal amounts, 10 to 30 drops, act as a nervous excitant, stimulating the trophic apparatus—(Lydston).

Under prolonged use these solutions tend to accumulate to a greater extent in nervous than in other tissues.

Respiratory System.—Ten to fifteen drop doses effect special change in respiration other than increased power and stimulus of the respiratory center. It has been held, with authority, that small doses (5 drops) stimulate endings of the pulmonary vagi.

Absorption and Elimination.—Arsenauro and Mercauro are readily absorbed by the blood.

Their presence may be detected in the viscera, bile, urine, sweat, the bronchial and intestinal mucous membrane and even

in the parenchymatous tissues. It is eliminated very slowly from the system by the intestines and rapidly by the urine; possibly also, by the bile and the skin; the saliva, milk and even the tears are said to share in the process of elimination.

Ten to thirty drop doses prevent tissue change. Their therapeutic action is certainly to modify and improve nutrition.

Temperature.—The temperature is unaffected by medicinal doses of Arsenauro or Mercauro.

Eye.—Large doses of these solutions, 60 to 80 drops, in diseases of the eye are followed by œdema of the lids, but no injection of the conjunctiva.

"The puffiness of the lids produced sometimes by large doses aggravates no diseases of the eye. for no congestion of the conjunctiva is produced."—(Short.)

Untoward Action.—Differing from the characteristic symptoms of poisoning produced by medicinal doses of other solutions of Arsenic, in susceptible persons, these solutions have been reported without aggravated toxic effect.

Frontal Headache.—A tendency to vertigo, frequent alvine evacuations have been reported in rare instances, but these idiosyncrasies are easily controlled by lessening the dose or increase the dilution with a larger quantity of water at the time of administration or giving it before, instead of after meals or vice versa.

Poisoning.—Several cases have been reported where the contents of original bottles of one ounce have been swallowed with suicidal intent, but except the symptoms mentioned above, under untoward effects, the cases promptly recovered. The claim is made for these solutions, that they have all the benefits of Arsenic, but their combination with Gold and Bromide prevents toxic effects.

Dose.—There are two methods of getting a patient thoroughly under the influence of Arsenauro or Mercauro.

1. Begin with a small dose, 5 drops, and increase 1 minim (0.006 c.c.) a day until untoward symptoms appear, namely, swelling of the lids, a tendency to vertigo or frontal headache, or the dose has reached 30 drops (1.0 c.); then decrease the amount one minim, or drop, each dose until untoward effects disappear, and continue this dose so reached for at least eight weeks.

2. Hypodermatically.—In the malignant diseases, carcinoma and the various cachexiæ, it may be desirable to obtain a very quick saturation of the system, and this mode of administration has been most highly extolled in such cases.

The liver has a strong elective affinity for them. The hypodermic use of them distributes them through the system just as mercury is distributed by inunction, carrying it immediately to all parts of the system by the circulation.

For hypodermic use, the following rule is appropriate:

Dilute with equal quantity of distilled water. Use alcohol friction over the part where the needle is to be introduced (preferably the muscles of the back). Let the injection be given deep into the muscles and be followed by active friction with alcohol after injection,

Note.—Dilute at one time only sufficient quantity for each injection.

Incompatibles.—With all organic matter.

It is best to direct the patient to drop the dose to be taken into a half tumbler of water at meal time, either before or after meals. Careful study of the effects of the drug in each case will make it possible to guard its administration so that tolerance can be established. A result much to be desired in order to secure the maxim benefit.

Considering the enormous doses to which the arsenocophagi becomes habituated, failure in the medicinal administration of the solutions argues the want of ability to employ them scientifically. Their superiority over all other preparations of Arsenic is paramount.

Internally.—Arsenauro is a peculiarly efficient remedy in Chronic Scaly Skin diseases. Like all other specifics, it influences diseases of a chronic nature more favorably than acute disorders. This preparation, therefore, is a most valued remedy in psoriasis, lepra, and squamous eczema. If syphilis co-exists preference should be given to Mercauro. Pemphigus, Prurigo, Acne and Lichen Ruber have also been favorably influenced by the continued administration of these solutions. In the successful management of these chronic skin diseases, it is necessary that the preparation employed be given in as large doses as can be tolerated by the patient, and the treatment continued unremittingly for a long period. It is well to employ these solutions alternately in these cases—say 6 weeks of Arsenauro—rest a week from any treatment, then six weeks of Mercauro—rest a week, then Arsenauro, and so on.

Lymphoma, whether superficial or occupying the great cavities is benefitted greatly by similar treatment.

Asthma and Bronchitis, whether acute or chronic, accompanying or succeeding scaly skin diseases, are singularly amenable to these solutions when the dose is carried to the full physiological limit. Another con-

dition, Dysmenorrhœa, frequently noticed in women with a tendency to Asthma, or subject to chronic diseases of the skin, is often cured by Arsenauro. The obstinate and often incurable disease known as pernicious Anæmia yield better to Arsenauro than to any other known remedy. The effect of the compound in this disease is not simply due to its increasing the number and quality of the red blood corpuscles, but also to its preventing or delaying their destruction in the portal circulation.

It should be given continuously and in gradually increasing doses until the symptoms due to intolerance are present, when the increase should cease and the same dose be maintained for some time. By carefully watching the indications and by the timely use of laxatives the dosage may be easily adjusted, so that the full benefit may be derived from this valuable product.

The statements in the preceding paragraph are applicable also to Leukemia, whether splenic, myelogenic or lymphatic, and to Hodgkin's disease, of course bearing in mind Mercauro preferably, if Syphilis co-exists.

Arsenauro and Mercauro rank next to quinine in the treatment of Malara. Chronic cases, in which quinine has lost its power are benefitted in a marked manner by these compounds. It is a peculiar fact that relapses are fewer after treatment by Arsenauro than after the use of Warburg's Tincture or quinine. It can be employed in cases of Malaria at all times without regard to the presence or absence of fever or chills.

It has remarkable efficacy in the treatment of Neuralgia of the intercostal and fifth pair of nerves. Arsenauro is equally valuable in these cases whether the diseases be due to Malaria or General Debility.

The author wishes to urgently recommend the use of Arsenauro in Pulmonary Phthisis. In certain forms of this disease he regards it superior to any other remedy. Particularly useful in those conditions which are characterized by excessive expectoration and a slow degenerative process.

The good results of this treatment in these cases is shown in a conspicuous manner by a marked improvement in the general condition of the patient, there being a lessened pulmatory secretion, a reduction in temperature, improvement of the appetite and consequent increase in the body weight.

In chorea, arsenauro very justly merits the name of specific very rarely failing to effect a cure when judiciously administered. It should be given in full doses, and increased as tolerance is established.

This medicine seems to act equally well in gastralgia; many irritative conditions of the stomach are relieved by minute doses—2 to 5 drops. It is particularly valuable in gastric ulcer and cancer.

It has proved of great service in hay fever, spasmodic asthma and acute coryza.

It is particularly serviceable in catarrhal pneumonia and in chronic bronchitis. It is highly recommneded in diabetes mellitus.

Rheumatoid arthritis is more favorably influenced by the use of this medicament than by any other treatment. Its combination with bromide of mercury—mercauro—has produced better results in secondary and tertiary syphilis than mercury alone in any form—and especially has this been noted in the stigmata of nervous syphilis. Sommolence is a threatening prodrome of the cerebral complications of syphilis. It varies in intensity from mere drosiness to profound lethargy. In the milder cases the patient may attend to business, but his executive ability is greatly impaired. His memory is poor. He is unable to concentrate attention upon the matter in hand, and often falls asleep at work, though the previous night may have been passed in deep and continual sleep.

Circulatory disturbance, the result of arterial disease is evidently the casual factor in these cases. Accordingly, many such cases if not properly treated, eventuate in thrombosis, softening and hemiplegia. The gold in the compounds seems to exert a powerful influence in restoring the circulation to a normal basis and the arsenic and mercury act as tonics and eliminatives.

Certain nervous diseases of the aged, such as melancholia and hypochondria, are often relieved by small doses of arsenauro.

Administration.—Arsenauro and mercauro should be given ordinarily after meals. There are certain conditions, however, requiring its administration in small doses before meals. Children are much less susceptible to them than adults, often being able to take adult doses with impunity.

During a course of treatment with these solutions the patient should be instructed to watch carefully for the first outward manifestations, such as puffiness about the eyes, nausea, diarrhoea, numbness of the fingers, or frontal headache, dizziness or vertigo. Any one of these symptoms is an indication that the dose should not be increased and it may be necessary to lessen the dose, or even to discontinue the remedy altogether for a while—temporarily.

Here we have old and well-tried remedies, made infinitely more valuable through advances in chemistry and for which I give credit to an enterprising Amercan firm.

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Superior to IODOFORM. **Odorless. Tasteless.**

No more expensive to use than Iodoform, being at least four times as voluminous.

NOSOPHEN

Iodoform is universally regarded as such an excellent healing agent, that claims of superiority over it for Nosophen may appear as an exaggeration, but there is indisputable clinical evidence that it causes a wound to heal more rapidly, and with less or no suppuration; moreover, it never produces a dermatitis around the edges of a wound as Iodoform always does, Nosophen being absolutely non-toxic and non-irritating. Besides as a surgical dressing in major and minor surgery, it is adapted to other most varied employment, as an antiseptic in the treatment of chancroid and all abscesses and ulcers, herpes, eczema and other skin diseases, either as a powder or, combined with vasaline and lanoline, as an ointment; Nosophen is a strong desiccant and excellent results are obtained with insufflations in purulent discharges from the middle ear, in nasal catarrh, etc.

Eudoxine (the Bismuth Salt of Nosophen).

This chemical salt of Nosophen is intended for employment as an intestinal antiseptic and as such it gives most excellent results. To judge from clinical reports, it is decidedly an efficient intestinal antiseptic, and has the great advantage of being absolutely harmless and non-irritating, odorless and tasteless. Indicated in typhoid fever, chronic intestinal catarrh, diarrhœa of phthisis, infantile diarrhœa, chronic enteritis, etc.

Literature on request. Sole Agents for the U. S. and Canada:

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An Important Advance in Gonorrhœa Therapeutics. **Protargol**

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Selling agents for the Bayer Pharmaceutical Products:

Aristol, Creosote Carbonate (Creosotal), Europhen, Ferro-Somatose, Guaiacol Carbonate (Duotal), Hemicranin, Heroin, Iodothyrine, Lacto-Somatose, Losophan, Lycetol, Phenacetin, Piperazine-Bayer, Protargol, Quinalgen, Salicylic Acid, Salophen, Somatose, Sulfonal, Tannigen, Tannopine, Trional.

Orthoform as a Local Anæsthetic, Analgesic and Antiseptic.*

Before the discovery and use of cocaine very little was accomplished in producing local anæsthesia, except by means of cold, freezing mixtures, etc., these and other similar substances being used for the purpose of accomplishing these results.

Cocaine is a complex group. Several observers have experimented with this group to ascertain whether the complete cocaine group was necessary to produce anæsthesia, and to ascertain whether anæsthesia could be induced by eliminating one or more of the poisonous groups. Merling prepared a substance having similar properties to cocaine, called eucaine; it is a benzoyl methyl ester of methyl piperidine. Einhorn and Heinz submitted the entire class of compounds to examination, and prepared nearly forty compounds, which they submitted to physiological tests, and made the discovery that the esters of the aromatic oxy-amido acids possessed greater anæsthetic action than their benzoyl compounds. The one having the most active local anæsthetic effect was the methyl ester of the para-amido-meta oxy-benzoic acid. The name of Orthoform has been given to this compound.

Orthoform occurs in a white, voluminous crystaline powder, without odor or taste. It is very slightly soluble in water. This is one of its great advantages. It is so slightly and slowly dissolved that only small portions are absorbed. Its anæsthetic action continues for hours; does not pass off in a short time like cocaine and other kindred substances. Orthoform has no effect when applied to the unbroken skin. When applied to healthy mucous membrane it only produces slight anæsthesia after considerable time. But when applied to the exposed nerve it produces complete anæsthesia in a short time, and its action is prolonged. As Orthoform is almost insoluble it must be applied in the form of dry powder, or as an ointment. It does not produce anæsthesia beyond the surface on which it is applied. It takes from five to twenty minutes to produce complete anæsthesia. It never produces any constitutional symptoms, no difference how much is applied, or over how large a surface. Orthoform is absolutely non-poisonous. From 30 to 60 grains have been given to rabbits for several days in succession, and dogs given doses of 45 to 90 grains without giving rise to any symptoms; 45 grains introduced under the skin of a dog gave rise to no toxic symptoms. Orthoform is also strongly antiseptic.

Shortly after receiving a supply of Orthoform I was called to see a case of advanced pulmonary and laryngeal tuberculosis, under the care of Dr. J. V. Anderson at the Toledo Hospital. The patient had been unable to swallow even cold water without severe pain for three months. I was called to see what could be done to relieve her of this severe pain, as she was suffering for the lack of food and drink. Now was a time to see what Orthoform would do, so I applied it to the inflamed and ulcerated surface of both pharynx and larynx with a powder blower. In a few minutes she was free from pain, and drank a glass of milk without the least pain. The anæsthesia lasted for several hours. The nurse was instructed to use the Orthoform upon the return of pain. This was kept up and the patient experienced no more pain in her throat, and had no difficulty or pain in swallowing.

After getting such a brilliant result from Orthoform in this case I concluded to give it a thorough trial. I have used it in a large number of cases of rhino-laryngology, and have never failed to get complete local anæsthesia when applied to exposed sensitive terminal nerve endings. In all forms and varieties of ulcerations, in the nose, mouth, pharynx or larynx it gives absolute freedom from pain, the effect lasting from several hours to several days. It is so thoroughly antiseptic that I find ulcerations healing much more rapidly when Orthoform is used than when it is not used. In troubles of the fauces where there is no ulceration, but where the epithelial layer of mucous membrane has been denuded, the application of Orthoform relieves the pain and reduces the inflammation. It seems to act upon the vaso-motor nerves and empty the blood vessels and keep the parts contracted for hours and even days with no after dilatation. With cocaine we can empty the vessels, but after a short time, as soon as the effect wears off the blood vessels become dilated more than before its application. The danger of constitutional effects and the danger of creating a cocaine habit prevents its continued use. Neither of these objections can be raised against Orthoform. After operating in the nasal cavities under the influence of cocaine, I apply Orthoform freely, and as the result have no pain, and the vessels do not dilate and hemorrhage does not return, and the parts heal very rapidly.

After the removal of the faucial tonsils I apply Orthoform to the cut surfaces, the patients can eat solid food without pain, and the parts heal quickly. There is no pain after removal of an elongated uvula if Orthoform is applied.

*John North, A. M., M. D., etc., Toledo, O.

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Charlotte, N. C.

In all cases of painful laryngeal troubles in which I apply Orthoform, the pain is relieved at once, and the patient experiences a relief that lasts for hours or days.

I had a very painful carious tooth. Cocaine would relieve the pain for a short time. I packed the cavity with Orthoform, and had no pain in the tooth for a week.

A patient asked me to go to a dentist with him to have an impacted wisdom tooth removed. The tooth had grown up against the adjacent molar at an angle of forty degrees. Cocaine was applied and the gum cut away from the tooth, and the alveolar process cut away from the tooth on both sides as far down as possible. The tooth was necrosed, and broke down under the forceps. Several efforts were made to remove the stumps and roots, and the soft parts were terribly lacerated. The dentist said that the jaw would be very sore and painful for a week. I packed the cavity with Orthoform; in a short time all pain was relieved, and the patient could eat with no inconvenience. The relief of pain lasted eight hours, when it was again packed with Orthoform, which relieved the pain for another eight hours, when the third application was made with no return of pain. Twenty-four hours after the operation the dentist examined the case, and found no pain, soreness nor inflammation, the lacerated parts were pale and shrunken, and did not become inflamed in the least. I have applied it to fresh, painful cuts, with removal of all pain.

This is about the extent of my use of Orthoform. I am convinced that it is a very valuable remedy in removing pain when applied to nerve endings. Its antiseptic and healing properties are also of very great value. It is a remedy that I could not dispense with in my practice without very great inconvenience.—*American Medical Compend, Nov., 1898.*

Congratulate You, Gentlemen!

When a House that is committed to a policy of Medicamentavera—to quote its own motto—finds itself compelled continually to enlarge its borders, it is a standing rebuke to those who would practically deny that "honesty is the best policy." Indeed, the products of Parke, Davis & Co. are so thoroughly and warmly appreciated by the medical profession that this famous exponent of the "gospel of the good goods" has frequent occasion either to build new home laboratories or to multiply its distributing facilities.

Not to speak of their manufacturing laboratories in Walkerville, Ontario, and in London, England, which assist in more promptly supplying their Canadian, English, East India and Australasian trade. Parke, Davis & Co., with a similar object in view, maintain branch establishmrnts in these United States in New York City, Kansas City, New Orleans and Baltimore—each one of which has been obliged to seek more room than was deemed necessary on its original installation. Their flourishing Baltimore branch is the latest instance.

Although only established in 1896, in what was then considered very spacious premises, the increased volume of business has thus quickly made it imperative to seek larger quarters. A "removal notice" from the gentleman in charge of this branch, Mr. O. W. Smith, informs us that its new and commodious home is now to be found at 103 E. German street, Baltimore, Md.

We cannot do *less* than extend our congratulations to Parke, Davis & Co. for this substantial evidence of the rapidly growing popularity of their preparations amongst the physicians and pharmacists in the populous district tributary to Baltimore. We cannot *more* than say that we have long since come to consider their products as our "Ultima Thule" of therapeutic efficiency.

In the treatment of influenza the relief of pain, of insomnia, of fever is best accomplished in most cases by the administration of Kryofine. No coal-tar drug can be recommended in a disease which in itself is characterized by marked prostration and depression. And just in this respect does Kryofine prove better than the older remedies. Its influence as an anodyne is enhanced by a distinct euphoria entirely apart from the relief of pain. It may also be given in solution with alcohol, and combines well with the drugs usually required in these cases.

The notable thing about the eminent public men now writing for Scribner's Magazine is that they are skillful and entertaining writers as well as men of affairs. For this reason the contributions of Senator Hoar and Governor Roosevelt are productions, as well as chronicles of action.

The March number of Scribner's shows Governor Roosevelt in the sort of description that he likes best—a narrative of a fight. With his usual candor he calls this "General Young's Fight at Las Guasimas," and pays a hearty tribute to his brigade commander and to the regulars who won equal honors with the Rough Riders in that hot skirmish. Any one who reads the colonel's account will have no belief in the story of an ambush. The advance was carefully planed out by consultation of the leading officers.

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SOLD BY DRUGGISTS EVERYWHERE.

Pruritis Ani.

A. J. Baker Flint, M. D., 102 Huntington Ave., Back Bay, Boston, writes of a case.

"I want to, in the interest of humanity, ask you to lay special stress upon the value of Unguentine in pruritis ani. I personally have been tortured with it for seven or eight years and never have found anything to act only as a palliative until I used your preparation, which has absolutely cured me and now my faith in it is such that I prescribe it for everything in which there is inflammation or where it is necessary."

A Card.

Dr. H. L. Campbell, Watauga, Tenn., writes: I received the sample of "Blennostasine" you so kindly sent me. I was suffering from an exteremely severe "coryza," and took a pill once every hour untill three had been taken. The cold disappeared as if by magic. I have prescribed it in two or three other cases of acute colds, with invariable relief.

2-Years

were required to perfect our new

"Vesta" Cubular

Lantern which we now offer as something extraordinary in the Lantern line. It has the Railroad Lantern's rugged constitution joined to the tubular system, and the result is a splendid light-giving, wear and abuse resister. We will, if desired, mail our special Circular of the "Vesta" Lantern; or, upon receipt of $1.00, we will send you (freight prepaid) the very best Lantern for general service you ever saw. Why not "see it" on those terms?

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Creosote in Phthisis Pulmonalis.*

After a brief review of creosote and guaiacol, and the various methods of employing these products, the author says:

In the treatment of phthisis the administration of creosote causes the fever and cough to diminish and the patient to improve in appetite and flesh. On examination of the pulse it will be noted there is a smallness and rapidity indicating an increased anæmia produced by the powerful action of creosote. When creosote alone is used life is made more comfortable to the patient but it causes an earlier termination. If in combination with tonics less anæmia is produced. It has antifermentative powers, and though it may not kill bacteria, it destroys their ptomaines and renders their action non-toxic and inert. In the stomach of consumptives a pathological fermentation is at all times going on, and this process is overcome by the action of creosote. It takes oxygen from the blood, and is changed into carbolates and oxalates, as a result of oxydation, thus causing the blood to assume a deeper color. In the treatment of phthisis it becomes of especial value if reinforced by nuclein. Nuclein increases the number of white blood corpuscles and is therefore a valuable agent in combating tuberculosis in its initial stage. Reviewing the aforementioned facts, we have creosote, guaiacol, nuclein and tonics as factors in the treatment of phthisis pulmonalis. How, and in what proportion can they be best combined to become efficient in the treatment of this disease. Beef, milk, and wheat peptonized, with creosote and guaiacol, otherwise known as "liquid peptonoids" with creosote, is an eligible method of administering the above in combination. Each tablespoonful contains two minims of pure beechwood creosote and one minim of guaiacol combined with the nutrient and reconstituent properties of "liquid peptonoids. In two different hospitals the entire consumptive wards were placed on this remedy with most excellent results and it will be necessary to quote but a few of the many cases under observation:

Case 1.—M. P., female, aged 49. Admitted to the hospital June 2, 1898; family history tubercular. For some years patient has been troubled with severe attacks of cough, resulting from an attack of lagrippe in 1894. Has dry, hacking cough, with gelatinous expectoration, containing bronchial and alveolar epithelium in a state of fatty metamorphosis, streaked with blood. Temperature, 101 degrees. Loss of appetite and dyspeptic symptoms. Inspiration, of cog-wheel character, expiration high-pitched and dullness on percussion. Patient has lost about 30 pounds within last few months. Weighed, Jan. 2d, 145 pounds. Blood count, 45 per cent. Hæm., 3,000,000 red cells, 7,500 white cells. Treatment began with one tablespoonful doses of liquid peptonoids with creosote, every four hours. Hereafter a rapid improvement took place. July 1st, patient's cough has disappeared, no bacilli in sputum, appetite good, weight 151 pounds. This treatment was continued till July 26th, when patient left the hospital, apparently well. Weight, 155 pounds, blood examination, 62 per cent. Hæm., red cells, 3,650,000, white cells, 7,200, no cough, good appetite.

Case 2.—F. W., male, aged 20; family history tubercular. Admitted June 9, 1898. Hacking cough, purulent expectoration, temperature 100 degrees; night sweats, loss of appetite and weight; blood examination, 43 per cent. hæm., 2,700,000 red cells, 7,000 white cells, weight 98; examination of sputum, bronchial and alveolar epithelium, bacilli. Same treatment as in case 1; began June 9. Patient improved. June 26th, coughs but little, no bacilli in sputum, appetite good, weight 103 pounds. July 13th, discharged apparently well, no cough, no night sweats, appetite ravenous, weight 105 pounds; blood count, 61 per cent. hæm., red cells 3,600,000, white cells 6,800.

All tubercular cases under my observation improved under this treatment, while others under plain doses of creosote gtt. V to XX showed but little improvement.

*Dr. L. H. Warner, Abstract.

Mal-Nutrition.

"I am sure the Imperial Granum Food was an efficient agent in restoring the health of a baby boy recently under my care. He was suffering from mal-nutrition with a most presistent diarrhœa. Many foods were tried and discarded, and I was beginning to loose heart, when I happened to think of the Imperial Granum. Its use proved it to be very easily assimilated, and I think it saved the baby's life."——M. D.

In gastro intestinal disorders of whatever origin the administration of Bisol, a soluble bismuth salt, is attended by the best results. It is of great service also in the diarrhoea of typhoid, of phthisis and in dysentery. As it forms a perfectly clear solution, the remedy is specially applicable in pediatric practice. It also forms a ready means for preparing a more powerful tannate, orsalicylate of bismuth than has been available heretofore.

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LISTERINE is a non-toxic, non-irritating and non-escharotic antiseptic, composed of ozoniferous essences, vegetable antiseptics and benzo-boracic acid.

LISTERINE is sufficiently powerful to make and maintain surgical cleanliness in the antisepti and prophylactic treatment and care of all parts of the human body.

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LISTERINE is invaluable in obstetrics and gynecology as a general cleansing, prophylactic- or antiseptic agent, and is an effective remedy in the treatment of catarrhal conditions of every locality.

LISTERINE is useful in the treatment of the infectious maladies which are attended by inflammation of accessible surfaces—as diphtheria, scarlet fever and pertussis.

LISTERINE is especially applicable to the treatment of scarlet fever, used freely as a mouth wash, or by means of the spray apparatus.

LISTERINE is extensively prescribed in typhoid fever, both for its antiseptic effect and to improve the condition of the stomach for the reception of nourishment.

LISTERINE agreeably diluted, is prescribed with very good results, in the treatment of diphtheria, both as a prophylactic and curative—internal antiseptic—agent.

LISTERINE is used extensively with good results in the treatment of whooping cough.

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LISTERINE is indispensable for the preservation of the teeth, and for maintaining the mucous membrane of the mouth in a healthy condition.

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Close clinical observation has caused LAMBERT'S LITHIATED HYDRANGEA *to be regarded by Physicians generally as a very valuable* RENAL ALTERATIVE *and* ANTILITHIC AGENT.

Albuminuria, Lithæmia,
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A Reason and a Relief.

It is the boast of Americans that no people in the world are as well fed as they. It is undeniably true that no nation is so much blessed with such wealth of food material as this. The present generation might be termed a race of indiscriminate eaters, and the problem of the busy practitioner today is not how to nourish the body, but how to successfully relieve it of the effete products of waste. To coin an axiom, we might say that "the secret of good health is good drainage, not the drainage of land, but that of the body." The human body has been very aptly compared to a machine, and the food which the average individual appropriates is the fuel which furnishes the energy to keep the machine in motion and repair. The complicated mechanism of the human body is more frequently disarranged by the incomplete combustion and consumption of the fuel furnished it, than any deficiency of nutritive material. The resulting condition is both known and called by the profession and laity, constipation. To the physician it is the unfailing source of many complications. It is the incident and the accident, the cause and the effect of physical degeneracy. We may assert without fear of contradiction that none of the ills, which flesh is heir to, is more intractable than constipation, nor is there one which baffles the skill of the average physician more. It is not surprising that the tendency on the part of the people to overfeed and take too little exercise has its logical consequence in the prevailing custom of taking all sorts of pills and purgatives. A universal cathartic habit is abroad in the land. An indiscriminate use of cathartics cannot be too strongly deprecated because most of them hold their victims in such bondage by becoming progressively inefficient. They not only deplete the system too rapidly, but the very griping which most of them produce is a signal that an affront has been offered to nature. The retaliation is the pain, the resentment, a subsequent failure on the part of the abdominal viscera to perform their functions. An agent which would offer to the busy doctor the means of sweeping from the system all waste, with the corresponding security against any of the objections which have been cited, would be a boon that would find a warm welcome and intelligent application in his hands.

Such a remedy we believe exists in "Syrup of Figs." Many careful general practitioners have reported that Syrup of Figs is not open to the same criticism as other cathartics. Its action is potent yet persuasive. It does not devitalize the patient by robbing the blood of its serum or by sweating the delicate mucous membrane of the intestines. It is a laxative pure and simple, and produces firm and full-formed stools instead of watery evacuations. Syrup of Figs is as agreeable to the taste as it is satisfactory in its results. It can be employed by the conscientious physician with every assurance that its use is certain and safe, and is not followed by any peristaltic paralysis on the part of the patient, as it does not produce the subsequent inertia of the bowels common to other cathartics. It can be prescribed for women, children, and people of sedentary habits, as a reliable remedy, which is maintained at a uniform standard of excellence. One that realizes the expectation of the doctor, without doubt or disappointment.

The stock market presents just now one of those exceptional opportunities for increasing small or large investments that does not happen very often in a person's lifetime.

Speculation was never as nearly a certainty as it is now, because the country was never in such a prosperous condition. Values must increase wonderfully and stocks and bonds should be purchased on any reaction.

The firm of Alfred J. Eno & Co., of 52 Broadway, N. Y., have exceptional opportunities for getting the best news on any probable action in the stock market, and can transact business in any stocks or Bond issues, or in grain and cotton. Their long connection with the Consolidated Stock Exchange makes their advice and efforts for intending investors of exceptional value. They will be pleased to answer any communication and to send a book explaining speculation upon request.

Pepsin is undoubtedly one of the most valuable digestive agents of our Meteria Medica, provided a good article is used. Robinson's Lime Juice and Pepsin, and Arom Fluid Pepsin, (see page 18 this number) we can recommend as possessing merit of high order.

The fact that the manufacturers of these palatable preparations use the purest and best Pepsin, and that every lot made by them is carefully tested, before offering for sale, is a guarantee to the physician that he will certainly obtain the good results he expects from Pepsin.

The Fortnightly Review's brilliant article on Lord Rosebery as The Disraeli of Liberalism will be reprinted entire in The Living Age for Feb. 18.

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THE MOST POWERFUL HEALING AGENT KNOWN.

These remedies cure all diseases caused by Germs.

Successfully used in the treatment of diseases of the Genito-Urinary Organs (Acute or Chronic):

Whites, Leucorrhœa, Vaginitis, Metritis, Endometritis, Ulceration of the Uterus, — Urethritis, Gonorhæa, — Cystitis, Ulcer of the Bladder, etc.

Injections of **Hydrozone** diluted with water, (according to the degree of sensitiveness of the patient) will cure the most obstinate cases.

Send for free 240-page book "Treatment of Diseases caused by Germs," containing reprints of 120 scientific articles by leading contributors to medical literature.

Physicians remitting 50 cents will receive one complimentary sample of each, "Hydrozone" and "Glycozone" by express, charges prepaid.

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Glycozone is put up only in 4-oz., 8-oz. and 16-oz. bottles, bearing a yellow label, white and black letters, red and blue border with my signature.

Marchand's Eye Balsam cures all inflammatory and contagious diseases of the eyes.

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THESE PASTILLES have now for many years been widely employed, and with the best results, by the leading Throat specialists and physicians generally. Long experience has shown the following kinds to be the more generally useful and frequently prescribed:

No. 2. IPECACUANHA. Readily taken by children. These Pastilles are of the same strength as the Lozenges of the British Pharmacopœia.
No. 3. MORPHIA AND IPECACUANHA. (1-40th grain Morphia and ¼ grain Ipecacuanha).
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No. 22. RED GUM. Astringent.
No. 23. EUCALYPTUS (GUM AND OIL). Antiseptic, stimulant, and astringent.
No. 24. COCAINE. (1-20th grain). Sedative to the mucous membrane.
No. 24a. COCAINE. (1-10th grain).
No. 26. CODEINE. (1-8th grain Codeine). Sedative.
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Dangers of Blisters.

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The only real use of blisters is in their revulsive and analgesic action, but the effect is better attained by less dangerous means, such as mustard plaster or cold baths.

Tri-State Medical Association of Mississippi, Arkansas and Tennessee.

At the regular annual meeting of the Tri-State Medical Association, of Mississippi, Arkansas and Tennessee, held in Memphis, December 20th, 21st and 22nd, 1898, the following resolutions were adopted:

Whereas, the medical laws of the various States have been so perverted by political influences as to give legislative sanction to grotesque, ignorant and dangerous sects of pretenders and charlatans; and

Whereas, the privileges granted to one of the most outrageous aberrations, namely, the so-called Osteopathy, constitute a disgrace to the State in which the "osteopathists" are legally intrenched; and

Whereas, a certain Willian Smith, Osteopathist, having been roundly denounced, together with his sect, by Parke, Davis & Co., and the Medical Age, now brings suit against both for $25.000.00 damages; therefore,

Be it declared the sentiment of the Tri-State Medical Association, of Mississippi, Arkansas and Tennessee, that Parke, Davis & Co., and the Medical Age are entitled to the sympathy of its members and of all medical Practitioners; that we wish and expect them to enjoy a complete triumph in repelling this legal assault; and that wheresoever a powerful House takes a bold stand in opposition to quackery it promotes the interests of legitimate and honorable Medicine and the welfare of humanity.

Mississippi State Medical Association.

MERIDIAN, MISS., Feb. 4, 1899.

Dear Doctor:—The 32d Annual meeting of the Mississippi State Medical Association will convene in Representative Hall, Jackson, April 19, 20, 21, 1899. Matters of special interest to the profession of the State will be discussed at this meeting and a full attendance is urgently desired. Five names will be selected by the Association, for appointment by the Governor, as members of the State Board of Health. Kindly forward the title of the paper you will read before the Association by the 1st of April, as I wish to embody it in the regular programme to be sent out then.

Very truly,
J. R. TACLETT, Secretary.

Board of MedicalExaminers.

The Board of Medical Examiners of the State of North Carolina will meet in Asheville, N.C.,Thursday afternoon, May 25th, 1899; all applicants are urged to be present at this time to register and be ready for examination on the following morning.

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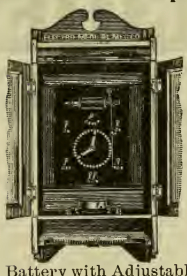

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The Charlotte Medical Journal.

Vol. XIV. CHARLOTTE, N. C., APRIL, 1899. No. 4.

Typhoid Perforation—Operation—Recovery.*

By Hugh M. Taylor, M. D., Professor of Practice of Surgery, University College of Medicine, Surgeon to Virginia Hospital. Richmond, Va., etc.

Gentlemen:—

You will recall that we recently, in connection with perforating gastric and duodenal ulcer, considered the subject of perforating typhoid ulcer, and its surgical treatment. Yesterday I had some interesting and instructive experience with a perforating typhoid ulcer, and I shall be glad, if I can infuse the interest and impart the experience this case is capable of conveying.

An interesting little boy had been sick with enteric fever for six weeks, was then convalescent for two weeks, again sick with fever for ten days, and again free from fever for three days, and convalescence seemed once more assured. But a death-dealing stroke, from a seemingly cloudless sky, hurled gratefully uplifted hearts back into blackest despair.

In the onset of fever, in this case, we had as a complicatiou so much bronchitis that it was by no means easy to say which was the most important etiological factor—the bronchitis, or the enteric fever. In fact, at no time were there enteric symptoms, and a diagnosis of enteric fever could only be made by exclusion, and the existence of a long continued fever. Not for one moment was there the slightest trace of cerebral trouble. Never once did the child fail to say when asked how he was, "I am all right," and daily he begged for something to eat, and to be allowed to get up. While his fever for weeks ran high, there was astonishingly little systemic depression, or functional disturbance. There were absolutely no abdominal symptoms, no pain on pressure, no tympanites, only a slight tendency to constipation, which yielded satisfactorily to a simple enemata or mild laxative. Towards the end of the fourth or fifth week infection of the middle *ear* occurred (probably typhoid infection, as may also have been the bronchitis) the abscess soon perforated ths drum, and discharged freely for a week or more, and then gradually yielded to treatment. You will recall, when I dealt with typhoid affections of bones, joints, otitis media, lymphatic glands, meningitis, and in fact, suppuration occurring in any part of the body during, or subsequent to typhoid fever. I told you it was an open question as to which was the pyogenic organism, the Eberth bacillus, staphylococcus, or mixed infection. Some writers are inclined to think that the typhoid bacillus, like the bacillus coli communis, with changed environment, may assume pyogenic properties. Others see in the intestinal lesions (ulcers) in the sores in mouth, nose, bed-sores, etc., abundant avenues for the entrance of pyogenic organisms and in the depression incident to the fever many foci of diminished resistance. Several weeks ago the fever seemed to have spent its force, and the child convalesced sufficiently to be up and around his room, but at no time were restrictions as to diet relaxed. About ten days ago he again had continued fever for ten days, but the case was still atypical in that there were no cerebral or enteric symptom. Two days before the perforation occurred he had no fever. This minute history is given you to impress the fact that serious enteric lesions may coexist without manifesting themselves by hemorrhage, diarrhœa, tympany, pain, etc., and this knowledge should beget in every case of typhoid fever, typical or atypical, a guarded prognosis, careful restrictions as to diet and exercise, and watchfulness to note the first warning symptoms of perforation.

Yesterday morning his father called to tell me the child had slept quietly all night, but awoke about six-thirty in the morning with sharp pain in the abdomen. The pain lasted only a few minutes, and was quickly followed by a natural fecal action. Thinking the pain was incident to having constipated action, his mother at once gave him a teaspoonful of syrup of figs. This, however, was promptly vomited, and several times during the next few hours spells of vomiting recurred. One more attack of sharp pain, which lasted only a few minutes, was experienced, and after that time, the child insisted that he was all right and had no pain. Such was the clinical history

*Clinical lecture to the Graduating Class of the University College of Medicine, Richmond, Va., Feb. 14th, '99.

given me on my visit at eleven o'clock, and I, of course, recognized suspicious symptoms of intestinal perforation. The child, however, did not look sick enough to justify such a suspicion. He expressed himself as being without pain, and his untroubled countenance confirmed this assertion. There were no evidences of shock, and those who saw him at the onset of the sharp attack could not say that even then he presented any of the symptoms of shock. His pulse was now 115, and his sublingual temperature 101. Respiration was not noticeably increased, and his morale was exceptionably good; there was, however, some appreciable rigidity in the abdominal muscles. An absence of fever for several days, the sudden onset of pain and vomiting, a recurrence of fever and rapid pulse, plus the abdominal rigidity, was the group of symptoms, which made me fear a perforation. Per contra, was the short sharp attack of pain peristalsis, incident to having an action. Was the vomiting due to the acute intestinal pain and the dose of syrup of figs? Was the fever, and increased pulse rate, a product of ptomain production and absorption within the intact intestinal tract? Was the slight muscular rigidity, voluntary contraction, incident to the fear of pain on pressure, or real pain conveyed to the solar plexus (the abdominal brain), and thence back to the abdominal muscles and putting them on guard. It is common experience in typhoid fever to have pain, sine perforation, tympanitis is the rule, not the exception, tenderness on pressure, notably in the ileo caecal region is not infrequent, and few differentiations are more difficult to make than some cases of atypical enteric fever from chronic or subacute appendicitis, and, time and again, I have viewed with anxiety just as typical symptoms of perforation as those mentioned in connection with this case, in which the results showed no perforation to have occurred. I am dwelling so minutely on the symptoms manifested to impress the fact that perforation may coexist with minor manifestations, or in fact, as has been observed by others, with no symptoms at all. I envy the man who, right or wrong, has confidence in his convictions, but I do not envy the patient whose destiny is in the hands of the abdominal surgeon who fails to realize that he who makes a positive diagnosis in all intra-abdominal lesions, will not infrequently be in error. What we need in abdominal surgery is an improved diagnosis, rather than an improved operative technique.

A second visit, two hours later, did not lessen my apprehension as to the serious nature of the case. There was no noticeable change except that his pulse had increased to 125, and his rectal temperature was 102½. The child was sent to the Virginia Hospital, and a consultation arranged with Drs. Hunter, Edward McGuire and Virginius Harrison. At this time there were more marked symptoms of serious intra-abdominal trouble, but still classical symptoms were absent. The face of the child was not expressive of impending danger, its respirations were not embarrassed, his abdomen was not distended, hepatic dullness was not effaced, and vomiting was not at all frequent. To offset these favorable indications his abdomen was still, to some extent, rigid, and what was especially ominous, as it is in all serious intra-abdominal infection, his pulse was now 140, while his rectal temperature was only 100½. The decreasing temperature, and increasing pulse rate, suggesting ptomain absorption from asepsis and shock, and reduction of temperature incident to shock of sepsis. Another significant symptom was no appreciable movement of gas, even with the phonendoscope, within the intestines. These last considerations pointed strongly to direct infection of the peritoneal sac, either by appendicial or typhoid perforation, but we must admit that the clinical picture was not formed by classical symptoms, and the portrayal could easily be taken for either appendicial or typhoid perforation. Whether the infection was appendicial or typhoid, was a matter of minor importance, as early operative intervention in either case was fully in accord with our conception as to what is best for the patient. The momentous problem to solve was whether the infection was within the peritoneal cavity, or within the intestinal tube. A majority happily decided that the symptoms were sufficiently pointed, to warrant a confirmatory incision. Fifteen hours after the first onset of symptoms, assisted by Drs. Edward McGuire and Virginius Harrison, I made an incision over the cæcal region. This site was chosen, as it would enable us to reach an involved appendix, and also give ready access to the lower portion of the ileum, in the last eighteen inches of which a large majority of typhoid perforations are known to occur. On incising the peritoneum, a quantity of sero-purulent fluid escaped from the peritoneal sac, but no gas. The cæcum was quickly delivered, and not more than twelve inches of the small bowel was examined before the punched-out looking, pencil sized hole in the ileum was discovered. There was but little, if any, appreciable inflammatory change about the intestinal lesion, in fact it looked as if a cobbler's punch had been drivn into a

healthy bowel, and a circular section punched out. To close the opening with deep matress and Lambert sutures, was the work of a few minutes. In ten minutes from the time the section was begun, the abdomen was opened, the lesion found and sutured. This fact, as to the time consumed, is not mentioned to extol rapid work, for not infrequently rapidity of operating is at the expense of thoroughness. We would, however, impress the idea that the technique of dealing with typhoid perforations may be very simple and quickly completed. Upon first thought, it looks like desperate surgery to subject to celiotomy the cadeverous looking patient ill with typhoid fever for weeks, with the added prospect of prolonged anesthesia, extensive evisceration, etc., to find and suture the bowel opening, but knowing the usual site of the lesion, near the ileo cæcal junction, we have in all instances a starting point from which to begin our search.

In addition to the free discharge of seropurulent fluid from the peritoneal cavity, a number of flakes of lymph were discovered and not more than half an ounce of greenish looking fecal fluid was found puddled near the perforation. Suppurative peritonitis was obviously quite general, no effort at walling had been made. No one, who saw this clean-cut perforation, with not the slightest trace of adjacent plastic peritonitis could fail to be impressed with the idea that death was inevitable, without surgical intervention. Twenty minutes more was consumed in eviscerating the patient, and in thoroughly irrigating with hot saline solution the abdominal cavity, and in placing multiple gauze drainage. In thirty-seven minutes from the beginning of the operation the patient was removed from the table to his bed. Let us here remark, that twenty minutes of this time could probably have been saved if the patient had been operated upon in the morning. At that time it would probably have been best, merely to have sponged off the soiled area, and drainage might have been dispensed with.

Granting that it is formidable surgery to subject a typhoid patient to an abdominal section, the fact has been impressed that these patients are no worse off physically, than are many cases of appendicitis, which are thoroughly septicised, and the same is true in delayed operations, for bullet wounds, and in cases of perforating gastric, duodonal or gall tract perforations. Not infrequently an acute toxemia, with a necrotic appendix, as its focus, will in twenty-four, or certainly in forty-eight hours, bring even a strong patient to a typhoid state.

You may naturally ask, what hold upon life had this little patient, and others similarly situated, without operative intervention? I would say, from the revelations, absolutely none. As I have mentioned, there was not the slightest trace of plastic peritonitis, without which there was no possibility of an adhesion of the perforation to adjacent structures or walling in of the focus of infection. The discharge of fluid fecal matter, and its sequence, septic peritonitis, renders impossible a spontaneous cure. Students of the phase of our subject claim that †"there are certainly a number of cases on record, in which perforation could not be doubted, which have recovered," but Fitz has well said "since suggestive–even so-called characteristic–symptoms may occur, without any perforation having taken place, it must be admitted, that recovery from such symptoms is not satisfactory evidence of recovery from perforation." We may well understand how a typhoid ulcer may destroy mucosa and muscularis, and give rise to a local fibrino plastic peritonitis, and adhesion of the threatened point in the bowel, to whatever intra-peritoneal structure with which it may come in contact. This local adhesive peritonitis may give rise to pain, etc., just as suggestive of perforation as are the typical symptoms met with in some cases of real perforation. Intestinal lesions, from other causes, often present symptoms just as vague. It is impossible, in bullet wounds of the bowels, or in lacerated wounds from blows, etc., to know by the symptoms manifested that any such lesion has occurred, and not infrequently the perforating gastric or duodenal ulcer will be unattended by early characistic symptoms.

*Fitz reports that "in 56 cases of typhoid perforation the onset was sudden, in 15 the symptoms were gradual or latent, while in 5 there were no symptoms whatever pointing to perforation."

What hope does surgery offer patients seemingly and really doomed by the occurrence of typhoid perforation? It is claimed by Murchison, that 90 to 95% will die, for our part we are forced to think that a majority of the small number, supposed to have recovered spontaneously, were cases of mistaken diagnosis—cases of local peritonitis, without perforation. Granting, for the sake of comparison only, that Murchison's claims are correct and that from 5 to 10 per cent. of suspected perforations will recover spontaneously, a knowledge of the triumphs of operative surgery in this field, leaves no doubt as to its efficacy.

†Keen, Surgery of Typhoid Fever, page 218.

*Keen, Surgery of Typhoid Fever, page 217.

†Dr. Keen reduces the authenticated cases operated upon to 60 and 13 recoveries. Of the cases operated upon, within 12 hours, 26.7 per cent. recovered. Of those operated upon between 12 and 14 hours 30 per cent. recovered, while we may expect a total mortality, if the operation is delayed until after the 24 hours.

Statistics, as to early operative intervention impress the fact, that in this, as in so many acute intra-peritoneal infections, the "stitch in time saves nine's. Certainly in some instances it is a simple operation to incise the abdomen, draw out a few feet of intestines, apply a few sutures, dry a circumscribed infected area, and perhaps close the abdomen, without irrigation or drainage. Such a procedure should, we think, claim a small mortality from the operation per se. Late operative intervention, in bullet wounds of the intestines, and in perforating ulcer of every kind, has been and will be attended with a high rate of mortality. Ideal surgery contemplates an early operation to prevent the occurrence of septic peritonitis, and not until this fact is appreciated will the highest possible ends of operative intervention be realized. Success depends upon getting into the abdomen early, and out of it just as quickly as is consistent with thorough work.

In the absence of shock there was no reason why I should not have operated upon this child, as soon as I saw him, which was four hours after the perforation occurred, and I should have done so if I had at that time been sure of my diagnosis. If I had done so, I should probably anticipated the occurrence of septic peritonitis. Irrigation and drainage would not have been indicated, twenty minutes of the time occupied in performing the operation, would have been saved. Early operative intervention in bullet wounds of the intestines, will save from 65 to 75% of cases, and equally favorable statistics would result, from early surgical intervention in performing gastric and duodenal ulcer, and in appendicial perforations i. e., if we operate early enough, to anticipate, and prevent the occurrence of diffuse suppurative, or septic peritonitis. It is not the perforation that kills, it is the inevitable sequence of perforation, peritonitis, that destroys life by virulent ptomain production and absorption, and the perversion of functions essential to life. Masterly inactivity is consistent with an intelligent appreciation, and faithful discharge of duty, only until a diagnosis is made, and only until the surgeon can prepare for the operation and secure the needed assistants. Further delay has been designated criminal inactivity. If shock exists, unless very profound, it is an open question, in my mind, if you should ever wait for that to pass off, as not infrequently the shock of perforation will be merged into the shock of sepsis.

In the case of this little boy, although it had only been 15 hours since the perforation, and not more than half an ounce of intestinal contents had escaped, yet the abdomen was full of sero-purulent fluid, noting how quickly suppurative peritonitis supervenes. Every hour of delay increases the quantity of the escaped intestinal contents, and the area of peritoneal surface infected. My experience in late operations for typhoid perforation, has been as unfavorable as the early operation is favorable. A case met with in my own practice, a few years ago, would not consent to operation, until impending death from general peritonitis was only a question of a few hours. Classical symptoms of perforation made the diagnosis easy in its incipiency. Operation was advised within a few hours, after the first symptoms of perforation, and offered a fair chance of success, as the case had been a very mild type of enteric fever and the patient was practically convalescent. A section, four days after the perforation, revealed diffuse suppurative peritonitis, and a great sloughing hole, near the ileo cæcal junction. The patient survived the operation only a few hours. A second case, very similar to the above, was seen in consultation with Dr. Virginius Harrison. Dr. Harrison and I did not see this case until general peritonitis was in full blast, but the symptoms of perforation, we were told, were typical, and were manifested several days before we saw him. This patient lived only a few hours, after the operation. A third case, seen in consultation with Dr. Edward McGuire, was also marked by unmistakable symptoms of perforation. Operation was at once advised, but was declined, and this young mother died within 48 hours from septic peritonitis. My own limited experience, a study of the experience of others, and a comparison of the morbid changes incident to typhoid perforation, with those resulting from lacerated and bullet wounds of the intestines, and with intestinal perforations from other causes, impress the conviction that operative intervention "if it were done, when 'tis done, then it were well, it were done quickly"—quickly as to the time of beginning the operation, and quickly as to the time of finishing it.

The great abdominal surgeon, Gregg Smith, has written, †"At the worst, happen

†Surgery of Typhoid Fever, page 296.

†Abdominal Surgery, Vol. II, Page 783.

what may, the patient can be in no more deplorable condition than before operative interference was carried out, and I would plead for an attempt to reduce a mortality of one hundred per cent.," and we would add that the surgeon's knife alone can shed kindly light amid the encircling gloom, inevitably incident to typhoid perforation.

P. S.—It has now been six weeks since the date of the coeliotomy, convalescence has been uneventful and recovery is complete. Statistics should now read, 61 operations, 14 recoveries.

Relative Immunity to Toberculosis, The Altitude of the Ideal Climate and Intra-Pulmonary Medication.

By Charles Denison, M. D., Denver, Colorado.

It may be a questionable proceeding to open up a discussion which was so ably closed by the concluding remarks of Dr. H. B. Weaver, at the meeting of the Tri-State Medical Society held at Charlotte, N. C., reported in your Journal of February, ("Modern Views of the Nature and Treatment of Pulmonary Tuberculosis"). But those of us who were not fortunate enough to be present are doing the best we can, to help ourselves and brother physicians to elucidate this important subject, if we speak out as soon as we read the paper and its discussion.

Three points in this excellent paper seem to me ought to be specially noticed; however, not with entire concurrence in the conclusions stated.

Firstly: A questionable phase of the whole discussion depends upon the stated premise of Dr. Weaver's that tuberculosis "is not self-limited or self-protected," and consequently, as Dr. Levy expressed it, "there is very little hope at any time from using the real antitoxin." How are we going to square such a *premise* with the prevalence of tuberculosis which does not appear in mortality statistics and which the essayist presents, or with Whittaker's statement quoted, "Therefore in one-half of all the cases recovery is complete, or the disease is reduced to such quiescence as to become practically non-existent?" How are we to account for the very good results of treatment in Dr. von Ruck's 78 cases cited! It seems to be of questionable utility to base a discussion upon such an ambiguous premise. The self-protection or self-limitation, i. e. the immunity to seek, is only *relative* anyway, but who will deny its existence in any degree whatever? Dr. von Ruck and I went over this question several years ago when he visited me in Denver. He had previously claimed that there was no such thing as "immunity" to tuberculosis, thinking probably of *absolute* immunity. I claimed that the immunity possibly *obtained* can only be *relative* and that an "absolute cure" is a questionable term to use. The gradual approach to the highest immunity possible, or resistant condition of the organism to tubercular action, is the object of our antitoxic or specific treatment. The conception of the Watery Extract, Dr. von Ruck writes me, dates back to suggestions then made. The natural "self-limiting or self-protecting" processes of the organism are important factors explaining the ever varying manifestations of tuberculosis, and the admission of such a contrary premise in the beginning of the argument is a mistake vitiating all after conclusions. Why is it that the growing tubercle bacilli will not use up all the nutrient material in the culture media before they themselves begin to die? Why is it that the *chronicity* of tuberculosis is such an aid, as it certainly is, to what we call the cure of the patient? Time is an important element in this process, as in financial contracts, as *it* is a proof of *relative* immunity.

Incidentally I would call attention to a remarkable fact, brought out by an analysis of Dr. von Ruck's 78 cases referred to. This bears upon the pulmonary area affected, i. e. that in only six or seven of them was the disease confined to one lung. I can not state positively that my own records of unreported cases would show as high a ratio of affection in both lungs, but I think the analysis of his cases is a confirmation of my own experience in Colorado, strengthening the belief that there is more yet to learn about tuberculosis than taught by the records in standard medical books as to average area of lung affected. It all goes to show how surely tuberculosis, as it becomes seated, verges into a general infection.

Secondly: Dr. Weaver says, "an ideal climate if it could be found for consumption is one of moderate elevation, 2500 or 3000 feet." As the preceding argument based upon "dryness, cold, sunshine, and altitude" is about the same as that formulated by me over twenty-two years aago* and which has never been refuted, why not go on and work out the "ideal climate" according to its legitimate conclusion up to as near "the altitude of approximate immu-

*"The Preferable Climate for Consumption, or the comparative importance of different climatic attributes in the arrest of chronic pulmonary disease" (Reprinted from the Transactions of the Ninth International Medical Congress, Sept. 1897.)

nity" as possible? This extreme height for your latitude would be about 7000 feet and in Northern New Mexico. An all-the-year-round climatic home, in which to fight tuberculosis, should be if possible within one or two thousand feet of this approximate immunity altitude, and anything less, so far as rarification of the air is concerned should be conceded only in the way of a compromise. This is such an allowance as can be made for personal idiocyncracies, severity and acuteness of disease, nearness of good professional service, advantages of good feeding and care, and a pleasurable life.

From Central Arizona circling around through New Mexico, Colorado and into Wyoming is a belt of land over a thousand miles long and averaging say one hundred miles wide, extending into and out of the mountains, between five and seven thousand feet above sea level and including the regions about Flagstaff, Tombstone in Arizona; Silver City, Albuquerque, Las Vegas in New Mexico; Trinidad, Canon City, Colorado Springs, Denver, Greeley, Fort Collins in Colorado, and Cheyenne in Wyoming. Somewhere in this belt* the "ideal climate" in which to successfully combat pulmonary consumption can be best chosen, if done without reference to the difficulties of getting there and the inconvenience of a new and unsettled country.

If you compare the "preferable attributes" of a climate of "approximate immunity to consumption" with their counterparts you will see that a health-resort, though located in the mountains at an altitude of 2500 to 3000 feet and upon a partially clay soil, and having a relative humidity averaging say 60% of saturation and cloudiness, rainfall, etc, in like proportion, is only a half-way approach to the possible preferable choice in this large and climatically varied country of ours.

Thirdly: As to Intra-pulmonary Medication," the impression is possibly conveyed in the main paper and its after discussion that the inhalation of the spray "under high pressure," as Dr. Burroughs specifies "about ninety pounds pressure" is what gives the benefit from this treatment. I think this is an error in that only sufficient pressure is of use to thoroughly work your Globe or Devilbiss vaporizing apparatus. Without any other force being applied to draw the air into the lungs, (as in the pneumatic cabinet) except the pressure which goes in through the wind pipe, I believe it is practically impossible to have any increased effect *during inspiration*. You can *by will power* increase the filling of the lungs more than by any such aid. Let us not be deceived by trusting in any such outside help. The finely vaporized inhalation is all right, though I believe that my own combination is to be preferred, given in the paper on "The Modern Treatment of Tuberculosis" Journal A. M. A., Sept. 24, 1898, because of its strong acid reaction (carbolic acid) and formalin contained, but the idea of this outside added pressure is misleading. It is only during *expiration* that you can fully distend the collapsed and diseased air spaces. The total average of intra-thoracic pressure is *negative* during life, as Einthoven has shown, and it is more so during unconscious breathing (involuntary state) and always decidedly negative during inspiration. The voluntary aid of the individual, during his own expiratory acts, is the only means to increase the distension and use of his tardy air-cells. I classify altitude and exercise under this voluntary aid. High altitude, exercise and the proper method of inhaling, which is inhaling with the out-going air regularly restrained under pressure, all work to the same end i. e., *the rythmical and mechanical distention of the air-cells*. Let the physician, who uses for his office treatments this antiseptic and germicidal mixture, instruct his patient to completely fill his lungs and then hold back expiration and by straining crowd this retained air into every unused part, and the good results will be much enhanced. It is easy enough to teach him by example. But this daily office treatment is not enough and when required there is a possible substitute for it. A like effect ought to be produced every hour in the day. For this purpose the In & Exhaler* is specially devised with valve-work arranged so that the expiration air pressure can be easily adjusted to what a given invalid can stand, and made of a size to be easily carried in the vest pocket, always ready for a five or ten minute's vigorous use every hour or two. That an intra-pulmonary air pressure equivalent to breathing at any altitude of two to ten thousand feet above sea level is thus possible to obtain at will may seem to be an extravagant statement to make, yet a considerable personal experience with this method, as well as that of many other physicians who appreciate it, fully justifies the claim. Even an invalid, too ill to leave his or her bed, can through a soft rubber tube, attached to the inhaler and passed underneath a slightly raised window sash, breathe the out-door air medicated to suit and ad-

*See fourth chart (elevations) in "The Climates of the United States in Colors."

*The Denver Surgical Inst. Co.

justed to the proper pressure for the case in hand.

Other phases of this important discussion are very interesting to me, but I have taken up enough of your space at this time.

Uterine Tonics.

By W. F. Milroy, M. D., Omaha, Neb.

At the meeting of the Nebraska State Medical Society in Lincoln, in 1897, as chairman of the section on Materia Medica, I introduced a general discussion upon that subject. One of the questions which I suggested on that occasion, was this: What is meant by the term uterine tonic as distinguished from those remedies which we are accustomed to speak of simply as tonics? Several answers to the query were offered but they were all of a very indefinite character and appeared to be an attempt to embody in words an idea which had but the most hazy existence.

Undoubtedly it is not possible in the present state of our knowledge to limit ourselves to the use of terms that are so scientifically exact as to be beyond criticism. On the contrary we are in the daily use of terms whose meaning is so indefinite and uncertain that the idea conveyed by them varies greatly according to the understanding of the user. Possibly some reader of the Charlotte Medical Journal will be surprised should he stop to consider how nearly this statement comes to be applicable to our word *tonic* used in its most approved fashion.

White, of London, in 1898 edition of his work on Materia Medica says of the word tonic (page 110): "So ill-defined is it that it is advisable never to use it if it can be avoided. As commonly employed, it means a drug which makes the patient feel in more robust health than he did before he took it. Obviously this may happen in many ways, such as, for instance, by improving the digestion or the quality of the blood."

The question concerning uterine tonics was suggested to my mind by the great number of samples of medicine with voluminous literature accompanying them, which continually find their way to my office and which are said by their manufacturers to possess the most remarkable value as *uterine tonics*. It is a fact beyond dispute that the meaning of the word tonic is ill-defined but it is also a fact that in the minds of many it has a distinct meaning though perhaps of a general character. Is it not true that the uncertainty relates not so much to the work accomplished by the tonic as to the mode of its accomplishment?

Etymologically considered, the word is derived from the Greek verb tonos, meaning to stretch, and it doubtless acquires its significance from the idea of the tone derived from a stringed instrument being modified by the tension to which the string is subjected.

This derived meaning which we give the word in using it in physiology or medicine, when applied in a concrete way would indicate if referred, for example, to a nerve that it transmitted stimuli or impressions with force and precision; of muscles that they had the power of firm contraction; of glandular organs that their cells were able to generate their proper secretion in correct amount and quality so that their work can be properly performed. In short improved tone, I apprehend, signifies increased power of each several organ to perform its physiological function and is similar or identical with the idea of improved nutrition. After all is said it seems to me the fact is that so long as our knowledge of conditions, of processes or things remains incomplete and indefinite we shall find it convenient to make use of terms to express our ideas, imperfect though they may be. The fault, is less in the expression than in the idea expressed.

Returning to the matter of uterine tonics, so-called, and consulting the afore-mentioned literature bearing upon the subject, we observe among the diseases and symptoms which are said to be amenable to their benign influence, the following: Chronic inflammation of the uterus or any part of it "granulated os," leucorrhœa, disordered menstruation, pelvic pains, subinvolution, displacements, relaxed and flabby conditions of the pelvic viscera, etc., etc. Now, many of these conditions either depend upon or cause a depreciation of the general health or do both. The indication therefore for their relief is the use of such means as, acting upon the nerve supply of the heart, will produce a firmer cardiac contraction and thus supply more nourishment to the digestive organs and thus enable them in turn to obtain from the food which is eaten a greater abundance of the materials which every tissue requires for its own growth and the accomplishment of its healthy life processes.

This, I take it, is about the sum and substance of what may be hoped from the administration of tonics when indicated for the relief of pelvic disorders or of any other ill. We give many other substances under the name tonic, but these may, for the most part, be also properly classed as foods.

Asking pardon for the same, if it shall appear to be a digression, I wish to call attention in this connection to an elemental principle that is frequently overlooked in the administration of tonics. One of the early and inevitable results of the occurrence of anæmia is loss of power in the heart muscle owing to the poor nutrition of that organ. The weakened contraction which then occurs reduces arterial tension, and as this condition of things develops by slow degrees and during a long period of time, the lumen of the small arteries becomes habitually smaller. In consequence of this, if the heart later on receives a new impulse from any source, it finds itself unable to respond owing to the increased resistance in the periphery. A consideration of these facts would suggest the necessity of administering a remedy which has the power to cause a dilitation of the small arteries and so permit the weakened heart to convey more blood to the tissues for their better nutrition. Now this is not a fine-spun theory, simply. I have many times demonstrated its correctness clinically. In typical cases of chlorosis, which had been treated unsuccessfully for months or years, according to the orthodox methods, I have seen the color return to the skin and mucous membranes, the abnormal appetites and numberless nervous and other symptoms disappear with astonishing quickness simply by the addition of such a remedy as I have indicated. I am accustomed to use under these circumstances, the U. S. P. Sol. of nitro-glycerine, given to the physiological limit.

It is true that certain drugs have a particular action upon the uterus, and some of them, as ergot, cotton root and rue, cause a contraction of the uterine muscle during the pregnant state and possibly at all times. I do not deny that there are cases of pelvic disease which seem to be benefited by the remedies to which I have alluded as uterine tonics, but, after a careful consideration of the matter and a certain amount of personal experience in the use of these mixtures I am persuaded that the chief good to be derived in this way is due to improvement of the general health and not to any direct action upon the uterus.

Though this paper is already longer than I intended it to be, there is one further point of which I wish to speak. Because I would cast aside the scores of concoctions which promise to help the physician out of all his gynæcological difficulties but which in reality leave him but the more hopelessly discouraged. I would not imply that I am one of those who would condemn every diseased woman to an operating table. It seems to me, however, as a suggestion of common sense confirmed by experience, that the more directly to the diseased part any medicament can be applied the more surely will it reach the part for which it is designed and the less likely will it be to exert an ill effect upon another portion of the body. For this reason, barring such remedies as are of recognized value in improving the general condition, I hope for more satisfaction in the treatment of pelvic, and especially uterine, diseases from applications through the vagina than through the general circulation.

To discuss, even superficially, the whole subject of vaginal medication is out of the question at present. The well-trod paths have been followed by me, some times with satisfaction, often with discouragement and ill success. It has often appeared to me that a wide field remained for study and experimentation in this department of gynæcology which, having been cultivated would yield a great harvest. While this may not have been done to the limit of what is possible, it has certainly been accomplished to a very great degree by the originator of Micajah's wafers which are manufactured by Micajah & Co., of Warren, Pa. My attention was called to this preparation some time ago. Like most men, I suppose, who have been practicing medicine for a good many years, I am not in the habit of spending my time looking for some new thing in therapeutics. Contrary to my custom in regard to new remedies and upon the recommendation of a friend, I used a specimen of the wafers in the case of a valued private patient. I have been more than pleased with the result. The combination is certainly most fortunate. I have not yet had suitable cases for their use in all the conditions for which the wafers have been recommended but I am free to confess that I have been greatly surprised at the prompt improvement which has followed their use where I have employed them. These wafers are in the form of a tablet which is introduced by the patient every second or third day, to the cervix uteri. I do not know how their salutary influence is exerted. It appears to be by modifying, in some way, the circulation of the parts. I have seen the blue color of passive congestion, the boggy cervix, the cervical catarrh, the erosion about the os, the flabby and relaxed vaginal walls, pathological conditions that are so common and often so annoying to physicians as well as patient, yield to treatment by these wafers as they have not done in my hands under older treatment.

I do not venture to hope that I have found an infallible remedy for all these ills, but

judging from my experience with these tablets thus far, I feel that they shall be my sheet anchor in this line of work for the future.

The Early Diagnosis and Treatment of Melancholia.

By E. O. Crossman, M. D., Medical Director of Markleton Sanatorium, Markleton, Pennsylvania.

It is not the purpose of the writer to discuss melancholia from the standpoint of an alienist, but to consider the disease as it comes under the observation of every general practitioner who is called upon to diagnose and treat it in connection with other diseases, real and imaginary.

No less than thirty varieties of melancholia have been described by various writers. However, all sub-divisions are unimportant until a diagnosis is made and the patient is under treatment.

The necessity of an early diagnosis is most important, as many tragedies may be averted if the physician immediately recognizes the symptoms as incipient melancholia, which is a grave condition and may be followed in a day by delusions homicidal, suicidal, or both. The pathology is somewhat obscure. It was supposed by the ancients to have been caused by "black bile," from the fact that the principal symptoms were gloom, ill grounded fear, etc.

Modern science demonstrates, however, that any lowering of the vigor of the motor currents to any muscle or gland reduces the activity of the part supplied. Hence when all the motor or out-going currents from the central nervous regions are lowered the system will be poorly nourished and its whole activity impaired and diminished. Bodily secretions are not copious, excretions are inefficient, the skin lax, the eyes dull, the hair and nails grow slowly and unevenly, urine loaded, tongue coated, bowels constipated. The whole body presents evidence of lack of vigor and of feebleness. When the motor currents are great the nutritive processes are correspondingly great. So melancholia is not due to a complication of pathological conditions, but to a lessening of the motor currents which diminishes the nutritive functions of the body, hence, it is a definite disease from the outset.

In his excellent work on "Diseases of the Nervous System," Dr. C. L. Dana speaks of "anxiety neurosis, or neurasthenia with fixed ideas." These cases are probably the most difficult to diagnose from true melancholia. But on thorough investigation the true mental and physical symptoms of melancholia will not be found. They are loss of flesh, insomnia, anorexia, anemia, constipation, usually lowering of the temperature, and constant and profound depression. There may or may not be delusions early in the disease. The patient always depreciates self and there is constant introspection with perhaps suicidal suggestions which are not as a rule considered seriously by the family, but in connection with the above symptoms should be considered with as much alacrity as hemorrhage following the severing of an artery. Vigilant measures should be employed promptly on the slightest intimation of suicide; indeed, this symptom should be sought as the patient is reticent in nearly every instance, and the physician must be on the alert with the utmost diplomacy. Any one of the major symptoms, however mild, should be considered, and the fullest investigation made, as it may be the beginning of melancholia, and much good will come to the patient if a prompt diagnosis is made and proper treatment applied early. There is one special form of this disease that should be mentioned in this connection, namely, oxaluria.

The urine should be examined in all cases and should the case prove to be this form the treatment is simple and recovery as a rule speedy.

Undiluted nitro-muriatic acid should be given in gtts v doses in half glass of water t. i. d. after eating.

Aside from neurasthenia the physician differentiates incipient melancholia from hysteria, hypochondriasis and dementia.

The hysterical patient is emotional, often laughing and crying in alternation, without adequate cause, sometimes attempting to simulate other diseases and always magnifying his trouble. The dement is usually buoyant of spirits at first with loss of memory and growing more or less sluggish as the disease progresses.

The self-accusatory symptom of melancholia is absent and emaciation is not marked.

The hypochondriac studies his pulse, tongue and bodily functions, while the melancholic is occupied with his own thoughts. Weakness of will and restlessness are also symptoms of this disease. The neurasthenic has slight attacks of vertigo, complains of weakness, irritability and unrest, is unable to concentrate his mind and worries much about himself. Many cases suffer from headache. Women usually have spinal pains with tremor of hands and tongue.

The treatment of melancholia should be hygienic so far as practicable, as the dyspeptic symptoms which invariably accom-

pany it render it imperative that as little medicine be given as possible. First, the physician should secure absolute control of the patient, complete change in his environments should be made, and an experienced nurse employed, who should watch the patient incessantly. In view of his suicidal tendency he must never be left alone for one moment until he is well. He should not be allowed knives, scissors, or anything that could be converted into a weapon. He must be nourished, and this is often the most difficult part of the treatment. Nourishing food should be administered at least every four hours. "Maltine with wine of pepsine" can be given with excellent results immediately after food is taken. This remedy gives tone to the digestion and is a most satisfactory "tissue builder" in this disease. If necessary the physician should not hesitate to resort to artificial feeding. The bowels should be kept open by the use of mineral waters, accompanied if necessary by enemas, three or four times a week.

Opium should be tried, it can in nearly all cases be employed to advantage; indeed I have seen a few cases of early melancholia aborted by its use. It seems to regulate the motor nerve currents and relieve the mental anguish. The deodorized tincture has proven the most satisfactory in 20 gtt doses every six hours. This may be combined with bromide of strontium gr. xv.

The patient should not be allowed to remain awake at night, but every poesible means should be employed before resorting to drugs to produce sleep. If they are employed, however, full doses should be given. Galvanism, massage, and mild Turkish baths should constitute a portion of the routine treatment.

The patient should be diverted and a moderate amount of exercise should be taken. Cycling is a good form as it furnishes both mental and physical occupation.

Typhoid (Enteric) Fever—In the Past and at the Present Time.

By Franklin Staples, M. D., Winona, Minn.

THE NAME.

The names which for various reasons in times past have been given to diseases, are found in many instances to have an historical significance, and to afford some information concerning the status of medical science at the time of their origin. The term, *typhoid* (*like typhus*), in its application to the disease now more properly known as *enteric fever*, was made known by the French physician, Louis, whose work on "Typhoid, Putrid and Adynamic Fever," appeared in Paris about the year 1830; but another French teacher, Gaspard Laurent Bayle, whose works antedated those of Louis by a few years, has been called the "god-father" of typhoid fever, because of the importance of his investigations concerning this affection. The name, *entero-mesenteric fever*, had been given to the disease by M. Petit, and, notwithstanding the fact that the tendency in the French school at the time of Bayle, Louis, Andral, Chomel, and Cruveilhier, was to seek for the pathology of diseases by means of dissections and clinical study, yet the name, *typhoid*, meaning simply a tendency to stupor, came into existence and was allowed to stand; although in significance it related only to what appeared of the disease outwardly, without regard to any pathological condition or organic lesion. French physicians seem to have had the right of way in the early nomenclature of this disease. The term, *dothinenteritis*, meaning pustule of the intestine, was given by Bretonneau, and at the same time *follicular enteritis* came into use; both terms relating to the characteristic lesion found in the mucous membrane of the small intestine. It has been called *nervous fever*, principally by the Germans, and *continued fever* and *winter fever*, because it does not result from paludal poisons, causing a distinctly intermittent form of fever, and may prevail in the temperate zones during the cold season.

It remained for our countryman, the late Professor George B. Wood, of Philadelphia, in his teachings in the University of Pennsylvania, and in his work on the Practice of Medicine, first published in 1847, to announce the simple name, *Enteric Fever*. In declaring in favor of this title, Dr. Wood observed: "It is merely intended to express the fact that this fever is distinguished from all other idiopathic fevers by the frequency and extent of the intestinal disease. Other fevers are attended occasionally with disease of the bowels; this almost always, if not essentially."

GENERAL DESCRIPTION.

The general account and description is given in brief as follows:

Adults are more liable to the disease than young children, although the latter are by no means exempt. Its invasion is generally insidious, its development gradual. There is languor, some headache, increased temperature, pulse accelerated. In the formative stage slight chilliness may alternate with the febrile action with some regularity each day. The tongue may be slightly

coated white at first, and later may be dry and glazed, sometimes with a brown stripe in the middle; (concerning this further on). If the disease increases in severity, existing symptoms become intensified and others are added. The abdomen becomes distended and tympanitic, and on the surface peculiar rose colored spots are often found. There is frequently a tendency to diarrhœa, and occasionally hemorrhages occur from the bowels; dark sordes form on the teeth and lips, and a low form of delirium supervenes. There is apt to be a certain degree of deafness, and a cough from bronchial irritation. Some of these symptoms are seen to result from the direct effect of the disease-cause on different parts of the nervous system. This brief outline of the course of the disease and a few of its leading symptoms are given to be reviewed by the reader, in the light of what is now known of its pathology—the bacteriology.

FORMER MANAGEMENT AND PATHOLOGY.

It was learned from observation that certain remedies are useful in the management of enteric fever. In the later light of science we have not only learned the reason for good results experienced in the past, not before understood, but have found ourselves in possession of important vantage ground for progress in the future. The following illustrates: More than seventy years ago, in a paper published in the North American Medical and Surgical Journal (April, 1826), Professor Wood advocated the use of turpentine in the treatment of enteric fever in certain conditions and stages. For other remedial means and agents then used in treatment, the following among others are mentioned: first, evacuation of the bowels, to be secured in the onset if possible, the use of refrigerant diaphoretics, cold ablutions, minute doses of mercury in some form, poultices and counter-irritation over the abdomen, and, in cases that require it, supporting and perhaps stimulating measures. Concerning the use of turpentine the words of Dr. Wood were as follows: "But, should the symptoms not yield, especially, should the tongue become very dry, and the abdominal distension remain undiminished, the oil of turpentine will prove an excellent remedy." In emphasizing his recommendation, he says: "I cannot too strongly impress upon the profession my convictions of the importance of this medicine. It may be employed in all cases, in the advanced stages of the disease, when the tongue is dry." This condition of the tongue, in the advanced stage of the disease, was found to indicate the existence of inflammation or ulceration of the glands in the mucous membrane of the ilium, known as Peyer's glands. Concerning the therapeutic action of the oil of turpentine in the disease, the author observes: "It acts in some measure as a stimulant, but chiefly, I believe, as an alterative to the ulcerated surfaces in the intestinal mucous membrane."

BACTERIOLOGY.

It may now be said that our present practical knowledge of specific germs as factors in different diseases, and of the germicidal action of certain remedies, has done much in late years to render the term, alterative, quite obsolete as applied in therapeutics. Explanation of the so-called alterative action of the oil of turpentine and other remedies of this class, in conditions such as exist in the intestinal canal and elsewhere in the system in cases of enteric fever, can now be made. The turpentine with its stimulant, diuretic, and anthelmintic properties, now comes to the front as a disinfectant and germicide remedy, whose properties render it especially useful, not only in the destruction of the typhoid germ, but in aiding the repair of lesions caused by infection, not only on mucous surfaces, but in tissues of various organs. It is readily taken into the tissues, is found in the urine and other excretions and is exhaled from the lungs. Our present knowledge of specific germs as disease-causes affords an understanding of much in pathology and therapeutics which before could be known only in part; this from external appearances and apparent results. The advance of our knowledge of diseases, of which the one at hand is an example, has been from a theoretical basis to the more satisfactory and substantial foundation in pathology. We have in this case the *bacillus typhosus*. Much laboratory work by scientists for several years has taught us something of the character of this specific disease germ—what may be its habitat outside the body, its methods of approach, the results of its pathogenic action in the tissues, and something of the therapeutic means for its destruction.

The serum therapy of enteric fever has not yet sufficiently advanced to be of practical value; but what has come to light in recent times concerning the etiology and pathology of the disease, has furnished valuable direction not only for treatment, but for prevention by suitable sanitation.

The disease is now known to result from an infection caused by a specific germ, the bacillus typhosus. The nature and behavior of this pathogenic germ is now well shown in the current literature on bacteriology.

The entrance of the germ infection is by direct passage into the stomach in articles of food or drink; and from the stomach it finds its way into the small intestines, into the tissues of various organs, and into the blood.

Although until late years a definite knowledge of the etiology of this disease was wanting, yet for a long time the conditions favoring the production of the specific cause were so well understood, that, as now seen, little advance was required to make the practical knowledge of the whole complete. A distinguished American author, a half century ago, wrote of the fever as follows: "It is certainly often generated in situations where human beings are crowded together, with insufficient or unwholesome food, and a confined and vitiated air. Hence it appears to originate especially in prisons, badly ventilated hospitals, large cities, camps and ships." To this may be added the statement that the infection may be taken from water used for domestic purposes, whose sources of supply have suffered from sewage pollution, from milk and from other articles of food which have been infected. The light of our present knowledge helps to verify the correctness of this account, and points to the kind of sanitary measures necessary to prevent the existence or the passage of infection. For this, chief importance is given to securing absolute cleanliness of the patient and the surroundings, and the careful disinfection and disposal of excretions. Unlike many other infectious diseases, the danger of contagion in this is from the lodgment of excrementitious matter on persons and clothing, from which it finds its way to the ingesta, rather than by readily infecting the atmosphere.

DIAGNOSIS.

As important aids in diagnosis, we now have what is known as the Widal-Johnson serum diagnosis of typhoid, in which a drop of the patient's blood is made to show the characteristic reaction, even at the inception of the disease; and the Ehrlich's diazo-reaction test by chemical examination of the urine. Of this test, it may be said that, while the specific reaction may be obtained in the urine, principally of typhoid cases, it is also found in that of persons suffering from certain other diseases, viz.: pneumonia and pulmonary tuberculosis, acute articular rheumatism, certain forms of meningitis, and a few other acute inflammatory diseases. These tests are based upon what appears in the bacteriology of the disease, and are found to be reliable, especially when made by competent operators.

PRESENT TREATMENT.

A summary of the treatment in use at the present time, based upon the germ theory of the disease, may be given as follows:

In the early stage of the disease the alimentary canal should be cleansed by means of suitable evacuents. Later in the progress of the disease caution is to be observed in the use of cathartics.* Small doses of mercury are admissible. The use of suitable germicide remedies is of principal importance. Beechwood creosote with the chloride of gold, so useful in certain forms of tuberculosis, is found to be an effectual germicide remedy in cases affected by the bacillus typhosus. The oil of turpentine as a remedy in the disease has been noticed. It is best given in emulsion.

Concerning the effect of the cold bath in the treatment of typhoid fever, it has been shown by experiment that the beneficial effect may be measured by the degree of the decline in temperature effected by the bath. It has been found by the French physician, Robin, that with the temperature lowered, a better oxidation takes place in the process of respiration, and thereby the toxic products of tissue destruction are reduced to harmless excrementary bodies.

In the matter of the Woodbridge method of treatment, of which much has been heard, the fact that the author in his work recognizes a germ infection as the disease cause, and advocates antiseptic and eliminative treatment, is of much greater importance than are the objections relating to his method of presenting his claim to the profession or to the public.

Finally, whatever medication may be brought into use in the management of this disease, by the use of such articles of diet as are found to be the best digested, and the nutritive principles of which are best assimilated, must not be overlooked. The nervous system, the vital energy of which is diminished, and may be overcome by the toxins of the disease, requires a supporting and sometimes, for a time, a stimulating treatment.

Peritonitis—Its Pathology and Treatment.

By Hal. C. Wyman, M. S, M. D., Professor of Surgery in the Michigan College of Surgery, Detroit, Michigan.

Surgical literature has contained so much about operations involving the peritoneum, and the results of operations have often been so unsatisfactory that many physicians

*For the proper use of cathartics in typhoid fever, see paper by E. C. Register, M. D., in The Charlotte Medical Journal for April, 1898.

who have had a large bedside experience are very much dissatisfied and do not care to read or hear anything more about the matter.

But there are others who have not lost faith in surgical art, and are interested in every thing which offers a reasonable chance of saving or prolonging the lives of their patients.

Now, while it is in some quarters the custom to say that there is no such thing as peritonitis, I want to use the term in this paper and use it with a broad and liberal meaning—to indicate a disease which has a definite mechanical cause, and which kills usually in one of two ways, viz.: either by obstruction of the bowels or by inflammatory toxæmia.

You will kindly notice that I say "kills usually," because you know very well that it sometimes disappears and leaves the patient well and sound, and that medicinal treatment cures as many, if not more, cases of peritonitis than surgical treatment.

The mechanical causes of peritonitis affecting the alimentary canal, the billiary passages and receptacle, the uterus and Falopian tubes, and the urinary bladder, an ulceration of the stomach, intestines or appendix vermiformis terminates in perforation; a wound, a hernia, a valvulus or an intussusception obstructs the bowels and peritonitis results. Poisonous material escapes from the free end of the Falopian tubes and peritonitis is the result.

Infecting matter passes from the uterine mucosa through the folds of the broad ligaments into the utero-peritoneal lymphatics and peritonitis (puerperal sometimes) is the result. The bladder ruptures and the escaping urine carries into the abdomen the causes of peritonitis. A stone in the gall bladder, cystic or common duct may allow a definite and tangible materies morbi to invade the peritoneum, and a wound of these organs may do the same thing.

Now, what is this peritonitis as we see it in the sick room? It is pain more or less local in some part of the abdomen. Pain that the patient complains of and calls us to see. Pain that we notice when we press in certain regions of the abdomen over particular organs, and pain that hangs on and cuts and bores with more or less persistence when not controlled by anodynes. There is, usually, fever ranging from 100 deg. to 105 deg. F. The heart's action is accelerated and the pulse sometimes has a peculiar running feel as if the heart that is driving it had beats of equal length. Respiration is quickened, abdomen may be distended, tense and drum-like. There may be nausea, want of appetite, and usually the bowels have not moved recently. The patient feels sick, looks sick, and is sick. After prescribing we are quite likely to say to him we will see you again in a few hours; for there is something about his symptoms—*tout ensemble*—that makes us apprehensive that our remedies may need to be re-enforced. When we make the second visit, if the cathartic has not operated, and we find him vomiting or raising gas and slime from his stomach, we are still more uneasy about his condition.

Perhaps we gave him an anodyne instead of a cathartic, and we find the pain subdued, but the pulse is not right, the skin does not feel normal—although relieved of pain, he is still sick. An enema may move his bowels; we will feel easier about him then. But, gentlemen, suppose the bowels do not move, and he is still prostrated? We know that this condition cannot last many hours. In true sense a condition and not a theory confronts us. What is it? We must run over the history of the case again, make a more thorough physical examination and learn the cause, find the perforation and close it; find the appendix and remove it; find the leaking tube and remove it. But, most important of all, we should find the obstructed bowel and release it.

I think there is little doubt about the recovery of the average case of peritonitis if the patency of the alimentary canal is maintained. In some cases when the history and the physical signs point almost unerringly to a perforated appendix, and we cut down, evacuate the pus, remove the appendix, and clean the infected region thoroughly, our patient keeps right on from bad to worse. His pulse gets quicker and smaller, he vomits and refuses food, is tormented by tantalizing thirst. His face grows pinched and anxious, hands clammy and cold. His bowels have not moved, the obstruction due to peritonitis; the inflammatory exudate binding coils of intestine was not loosened by the operation. He dies. All this happens in the sick room. The town talks. People are reluctant to submit to operation. The next case the doctor has he will be quite likely to hold, because he does not operate except as a last resort, and then, perhaps, does not do the right thing. For surely a man cannot get well, even if you do remove his appendix, whose intestine is flattened and bound down by more or less organized lymph, so that nothing can pass through it. The operator should be reasonably sure of having restored the the continuity of the alimentary canal before concluding his work. If separation of the adhesions which bind and obstruct the intestines is impracticable, then make an intestinal

fistula at a point in the distended gut just above the obstruction. This will enable the patient to live until the obstructing adhesion is absorbed. Such a fistula commonly closes spontaneously.

In most all cases of peritonitis in which the cause is a lesion of the alimentary canal an operation is necessary. Perforations resulting from typhoid and tuberculous ulcerations are not exceptions. Gun shot and stab wounds should not be neglected until the escaping contents have had time to set up the disease, but on the contrary, peritonitis should always be anticipated by a careful closure of all wounds of intestine and stomach. Some surgeons would make an exemption in favor of the latter organ, and have cited the case of Alexis St. Martin as an example of successful issue of a case of shot wound of the stomach treated without operation. But it is an exception that proves the rule, for the wound was so large, including much of the abdominal wall, that the contents of the stomach poured out and were not pent up in the cavity of the peritoneum—a condition quite different from that obtaining in the usual case of gun-shot wound of the stomach.

Again, hernias may often be reduced by taxis. Intussusception may be relieved by copious enemas of water. Volvulus may untwist itself. But that is another matter. We do not want to deal with the abstract features of peritonitis in this paper. The concrete aspect of the disease implies a copious exudation of material which is capable of doing a great deal of damage by obstructing the intestines while at the same time its purpose is the repair of leaks in the hollow viscera. Many of the cases of volvulus are caused by old peritoneal adhesions, the result of peritonitis caused by leaky Falopian tubes. Such cases are diagnosed quite clearly by the squirming of the intestine, its sudden onset, obstruction, vomiting, and a history of an attack of peritonitis which may have occurred years before, and which was at that time successful in closing the tube so that its infecting contents could not enter the peritoneal cavity.

The concrete aspect of peritonitis compells us to recognize a condition in which escaping contents of some viscus threatens the life of our patient, and it is clear that if the channel through which this material escapes is small and the quantity is small and feeble in inflammation producing power then the attack will be mild and of short duration.

The toxic effects of the disease, apart from the features we have just discussed, are very much less dangerous usually; and there is generally plenty of time to make a diagnosis safe and sure by bi-manual methods of examination. In peritonitis, unaccompanied by symptoms of intestinal obstruction, I think it is rarely necessary to make an exploratory operation for purely diagnostic purposes. The febrile symptoms, the pain, the swelling distinctly felt in some part of the pelvis or the retro-peritoneal regions, the waxy appearance of the skin, with the history of the attack provide material sufficient for a diagnosis and to justify an operation for removal of pus from any part of the peritoneum in which it may be found.

Why ovaries and tubes should be removed just because they happen to be implicated in an accumulation of pus located in the pelvis, I do not understand. There can certainly be no harm in removing the pus which is the sole source of the general sepsis in many of the cases and leaving the ovaries and even the tubes behind when the surgeon has the skill to separate the abscess wal from these very useful organs.

In those cases the patient must be sustained by the most vigorous resources of foods and drink.

If the system is so far infected that heat centers are overwhelmed, and the condition known as general sepsis is present, removal of pus sacks and drainage of abscesses is often like locking the stable door after the horse is stolen. Under such circumstances we usually find the patient exhausted by copious sweats and diarrhœa as well as fever. Water in quantities is often a sovereign remedy. It dilutes the poison, and should be used pure both internally and externally. It seems to act like a food sometimes and can be taken readily by patients who cannot tolerate a glass of milk or an egg or the gruels.

I have spoken of peritonitis resulting from infection of the uterine mucosa passing into the broad ligament lymphatics. Such cases are not uncommon in lying-in practice and many of the cases following abortion, and specific endometritis and vaginitis are of this class.

The woman usually has a chill a week or ten days after her accouchement. There is some fever, ranging in different cases from 100 deg. to 105 deg. F. The pulse is typical of peritonitis. The abdomen may be tender and tympanitic. There is anorexia, often copious perspiration and free movements of the bowels. Often, too, micturition is frequent and painful. The physical examination per vaginam reveals the uterus mobile. There may be a doughy feel to the right or left of the uterus.

One or the other, or both lumbar regions may be the seat of constant pain. Some-

times she will complain of pain in the side over the crest of the ileum. Pressure will increase the pain. There is a marked disposition to lie with the thighs drawn up. In some cases but one limb will be drawn up.

With the patient under anæsthesia the surgeon can sometimes feel a deep swelling behind the intestine below the kidney, or in the iliac fossa. These cases will generally recover after drainage of the retro-peritoneum, pushing that organ aside after the method of reaching the external iliac artery and if pus is not found carrying the wound upward and backward along the ureter toward the kidney, when, whether pus is found or not, draining by gauze, which should be introduced and the wound allowed to heal from the bottom by granulation.

The evacuation of pus, in my cases, of this type, has not been essential to a cure. But the fever has stopped, the pain has ceased, the skin has cleared, and the patient has recovered well and sound.

A Study in Metaphysics Through Drugs and Dream States.

By F. Savary Pearce, M. D., Instructor in Physical Diagnosis, University of Pennsylvania; Chief of the Medical Clinic, St. Agnes Hospital, Philadelphia, Pa.

In The Charlotte Medical Journal for December, 1896, the writer expressed himself on "Hygiene and Therapeutics," and in January, 1897, on "Confidence in Medicine," subjects which must necessarily be considered largely physically, but yet with a skirting upon the domain of the mind if a wise ultimate judgment is to be reached—greatest relief given to human ills.

The field of general medicine is so ineffably broad that every incitement of sincere observation of mental or material physiological or pathogenic states observed is worth record. The action of mind over matter is frequently reiterated, but the action of material upon mental processes is more apt to escape attention. The contention is made that while generalities are accepted almost universally by enlightened people, yet the finer delineations are apt to be less sought for than their bearing on health warrants.

By a now timely stimulus in the study of psychology the physician will most aid the cause of the higher medicine (*tempus fugit*), and win over better intellectual support to the *finest* art by the legacies of thought engendered in men, as for example, legislators, who will then, in truer understanding, never more hand over the keys of physic to shrewd purveyors of panaceas at so much a patient.

The effect of will, judgment, volition and imagination should be well distinguished, and still there will be left unsolvable mysteries. "Cast your bread upon the waters and it shall return to you in many days." Give all you know well, then will confidence in life be ascending ever. I am not sure Napoleon was complimenting the race when he said "imagination rules the world." At all events what a prosaic and indeed impractical sphere this would be without fully governed imagination to lead on toward the goal, desiring to tread on no ground lower than the stars.

DREAM STATES.

An intelligent woman, aet 63 years, came to me in December, 1896, a person of very acute perceptions in all channels of thought, and one whose energies are wrought to the highest pitch in mental and physical energy. This woman had no organic disease, was suffering from general nervousness due to exhaustion from pleasurable duties. I at once saw the usual composure had left the countenance; she was dubious as to whether her mind was "leaving" her—very earnestly so.

Her own statement well expresses the spell labored under for about a month to her great distress: "On about November 23d, 1896, I retired very late and also tired. I hurried into bed and my head had scarcely touched the pillow when a panoramic vision began to pass before my eyes. I opened my eyes to assure myself I was quite awake. Doing so had no effect on the vision, as it continued with my eyes open. I closed them again and the view was as I shall now describe it.

"First, a broad expanse of ground having the appearance of grass being scorched by the sun, and tall trees scattered here and there with but few leaves upon them, and they too looked as if sun-burned, the scene branching off to a river with bushes growing alongside, and continuing until it was only a narrow stream of water, followed by rich green fields with low trees and plenty of flowers around. The fields grew narrower and again the water appeared; this time the ocean, and far away in the distance were many sails, but very small, increasing in size as they came nearer, until the foremost one was seen at full size with sails all set, and the waves breaking against the ship seemed tinged with the peculiar blue-green shade that autumn clouds cast upon the water. In the distance was a light house, from which a continuous flow of sparks were emitted, such as one sees fly from the car-tracks sometimes.

"Then the ocean seemed merged into more green fields, and further on to another stream of water about the width of a street, and I saw no more, having dropped off to sleep.

"I can not tell the exact time it took for this panorama to pass before me, but it was two o'clock when I went to my room and about the last thing I remembered was the clock striking three. I brooded over my vision for a month, thinking my mind was astray, and at last, on December 23d, I consulted Dr. Pearce, relating the above, and he asked me to write it down for him, so I have written it to-day, more than two years later, from memory, but it was as if painted on my brain, every thing so clear and distinct."

The above case was undoubtedly a waking dream as shown by the fact that it persisted when the eyes were open, and then it continued on into the predormition. Explanation of such states may possibly be in an exhausted vaso-motor control of vessels of the brain, especially of the eye centres, and of a rapid stimuli given to neurons ready for extra nutriment, to give exit to conceptions from these uninhibited centres. So soon as this patient was "rested up" the phenomenon did not recur.

The time limit for the above described visual hallucination (one hour) shows that mental processes are more nicely defined, i. e., are slower for the rational order of service; as in full mental power it takes much longer for even realities (perceptions) to eventuate; while in dreams we are at the most rapid tide of rushing heterogeneous ungoverned mental action. This rapidity is shown in the dream of a sleeper, or in abeyed mind control in unconsciousness, as by the case of a young lady who had fainted but for a few moments, and yet during that time she recited at once, afterward, that she had lived vivid happenings of years of active life in the illusion. These phenomena should be carefully weighed, for a well meaning person might be won over to the subtle subterfuge of the clairvoyant should a neurotic faint come over such a subject seeking hypnotic influence for the elixir of life.

Another marvellous example of synchronous action of two minds upon the same subject, which I know to be a fact, and I withdraw from natural, (if they be) dream-states: A very intelligent lady recited to me the following. She and an uncle living in distant cities had never met, but had frequently heard and passed greetings through mutual relatives. Upon one night it transpired that each had dreamed of the other, and that they had met in the uncle's house, the realities of which were so striking that it was difficult to dispel on waking.

Depending on the idiosyncracy of the individual as to characteristics, in-born or acquired, does much of this vague and facinating study in metaphysics hinge; but we can hardly expect to ever go searching beyond these possible predisposing or exciting causes which as psychological medicine advances will be put to practical import; albeit the *fons et origo mali* be indeterminate. I have a child, 6 years old, in mind, precocious to a degree, who could sail in descriptions from earthly scenes to the clouds with as much real animation in the *unreal* view as if things "were that doth not even seem." This child's mother I treated for a most serious double pneumonia, and after the crisis was over, as oxygen inhalations withdrew; so strong was her imagination that death must come, that even my experienced consultant could not for days feel sure of recovery, so much did the mind influence the not seriously diseased body.

What explanation can be given to this? A male patient neurasthenic, dreams of "flitting about from one chimney-top to another like a bird, or of the grotesque feeling of being ground under the wheels of a box-car on which he was acting as brakeman."

DRUGS.

In the best standard drugs there is within limits a fairly wide variation upon different persons depending, of course, much on absorption, and when within the blood of proper metabolism. This brings up the whole subject of physiological chemistry, which, in future, must yield interesting facts. The work of Ira Van Gieson, M. D.,* is in point.

Behind this will, no doubt, glare the wall of *vital* action. Dr. S. Weir Mitchell's instructive paper upon the action of "Mescal Button" upon the visual centres, has interested me much. Dr. Mitchell took 3vi of the tincture of this cactus and obtained visual color effects that were beautifully kaleidoscopic. Those colors the author was not fond of, as red were never prominent in the field. The feeling of physical well-being was a general symptom and there was little after effect save mild gastritis. We tried to obtain a healthy blind congenital case to give the drug to, but in the examination of 180 children†, I have been unable

*The Formation and Excretion of the Metaplasm Granules of the Neuron.—Journal of Nervous and Mental Diseases, Feb., 1899.

†British Medical Journal, December 5, 1896.

†A study of the Blind, Transactions College of Physicians, Vol. xix, 1897.

to find a suitable subject, so have tried the experiment myself, it requiring, in my own case, 3vii (dram) to produce marked visual hallucinations. Experimented February 4, 1899, my pulse was 78 per minute; temperature normal, and respirations 20 per minute. I then, at 3:30 P. M., took 3i of tr. of Mescal Button, another at 3:40 P. M., one at 4 P. M., when a vague feeling of stimulated buoyancy came over me, though the pulse did not go above 80. At 4:30 P. M. I took a fourth drachm, and by 5 o'clock could get faint color effects of widening circles of pink and blue gradually closing in and recurring, to soon disappear when the eyes were opened. The feeling of stimulation continued, and I searched carefully for other effects, but found constant reiteration of the indeterminable numbers of rapidly passing beautifully colored circles, with now and then flashes of light and gold, as from an arc light. I took three more doses between 8 and 10 P. M., but the beauty did not vary in its adornment, and after doing some correspondence with apparent ease and in full faculty it seemed, I retired at midnight and dreamed of the same colors, but less distinct as to being in circular array, although it did not at all arouse dreaming of other things. I had a smart gastro-enteritis all next day.

The lesson personally gotten leads a willing patient and friend of the writer's to wish to try the experience, the lady contending that her imaginative faculty was not large, so we began on February 12th by giving the usual drachm dose at 7:30 A. M. and repeated this dosage at 8:30, 9:30 and 10:30, when the pulse was 74, temperature $98\frac{1}{5}$, and respirations slowed to 16 per minute, full and synthenic, the pulse remaining full but compressible. Teaspoonful doses were repeated until by 12:35 P. M. ten (10) drachms had been administered. The patient by 3 P. M., after eating a fair dinner, simply felt as a *madame sans gene*. She had no visions, hearing was very acute. The following is an abstract of the lady's notes: "At dinner time it was hard work to eat, for there was not the slightest craving for food, and my mind seemed wandering off to some unknown land. Only once was there any display of color. As I sat facing the window, eyes closed, there came across my vision a horizontal bar of blue-gray; this changed and became as a kaleidoscope, the colors gleaming and flashing very vividly, but it was only just the shades and tints of blue; at least, that seemed to be predominant. I felt after dinner a slight feeling of depression, and there was afterward only a slight disturbance of the stomach.

As I took more of the drug I could feel a general languor taking possession of me, and both head and body felt light. I did not sleep, yet I felt dull and had an utter indifference. I did not dream that night. I was restless, faculties keenly alert and it was several hours before I travelled into the "Land of Nod." The next morning the patient awoke feeling now quite exhilarated and "ready to walk miles." Then the effect wore away.

In the realm of peculiar actions of the mind largely in visual lines I have in the above desultory way made notes of some personal experiences. For much insight into this psychological study, as a whole, the excellent books given below should be read:

I. "Sleep and Its Derangements," by Wm. A. Hammond, M. D., 1869.

II. "Insomnia and Hypnotics," by Germain See, M. D., translated by E. P. Hurd, 1891.

III. Arbeiten Ans dem Gesammtgebiet der Psychiatrie und Neuropathologie von R. v. Krafft-Ebing, 1898. Article II. "Waking and Dream States."

1407 Locust St.

The Paliative Treament of Hemorrhoids.

By H. G. Thomas, B. Sc., M.D., Kirkman, Iowa.

That physicians are not even yet patronized for rectal diseases is a legacy to our present generation from the dark ages when the itinerant charlatan only attempted to treat such affections.

Medical progress has been wonderful in the past, and the least progress has not been made in the treatment of this part of the human body which has proven so profitable both to the specialist in this particular department and to the general practitioner who carefully considers these diseases. The newest neophyte knows the disease to be very common, yet no other part of the body when diseased yields more readily to treatment. This is especially true of hemorrhoids. The veins returning the blood from the rectum, because of the absence of valves, the erect position of man and the function of rectum are liable to become dilated, varicose, congestion follows with inflammatory exudate in the tissure and a tumor results; if above the external sphicter it is an internal hemorrhoid; if below that muscle, it is an external hemorrhoid. No class of people is exempt from this affection, whether much out of doors and given to healthy exercise, or one of sedentary habits. Nor can we say that diet or manner of dress, or even constipation, are potent causes, yet either

may prolong the trouble when once formed and after relief is secured may cause its return, as may pressure on the veins by the uterus, whether from pregnancy or otherwise, in the male enlargement of the prostate gland or obstruction to the portal system, or again a general morbid state of the circulatory system, caused commonly by a valvular lesion of the heart causing stagnation of all the veins with obvious results in the rectum, or pulmonary disease may produce like results. It is not now believed that heredity plays a part in the causation of the disease except as wealth and its attending evils—luxury and idleness—are transmitted from generation to generation.

The connection between the symptoms of rectal distress and the lesion of hemorrhoids is quite irregular. There may be great complaint with little local change, or much varicosity of the hemorrhoidal vein and little distress. But pain is what relief is sought for in the external variety. The distress may be constant, as caused by a foreign body, or the sensation of burning and smarting; it may be accompanied by spasmodic muscular contraction of the rectal muscles. Such symptoms are induced or greatly aggravated by long continued sitting, horseback riding, gormandizing or worshiping too frequently at the shrines of Bacchus or Venus.

In contrast with pain in external piles the internal varieties most prominent symptom is a constant leaking through the anus of a sanguineous discharge from the inflamed mucosa, later they protrude at stool and return of themselves to their natural place, but after a while they do not return of themselves as formerly, but the patient must push them back after each defecation. If pain exists with the protrusion an abrasion, fissure or ulceration exists as a complication.

While these symptoms are characteristic of each class to be sure of the diagnosis an examination must be made in every case, external piles can be inspected and internal piles readily seen with the speculum.

Only by strangulation and gangrene is their danger to life, but without proper treatment there may be prolonged discomfort.

Operation gives the most satisfactory results, but in many instances it is unnecessarily hazardous and again many can not spare the time to be operated on, or the facilities may not be at hand, and the patient may refuse to be operated on even when such operation is clearly indicated. Paliative treatment in such cases is our only refuge, and often results in cure,

If we know one to be disposed to this trouble, prophylactic measures are to be employed, out-door exercise advised, eschew highly seasoned food, avoid constipation, and alcoholics prohibited. If cirrhosis is suspected, treat accordingly. We must accept it as a fact that smoking is a fruitful cause of the trouble, hence advise that habit to be discontinued. In the internal variety an enema of a pint of cold water twice a week will do good.

These are unusual cases for physicians. More commonly inflammation exists when a physician is first consulted, and prompt relief is desired. An ointment of belladonna and opium is usually applied and we all agree with negative results. If cocaine is used, little benefit is received. It is now my practice to give 10 grains of calomel, and follow in a few hours with a dose of Rochelle salts in a glass of water; this has a paliative effect, and advise a restricted diet and rest. Three or four times daily bathe the piles in a 50 per cent. solution of Glyco-Thymoline (Kress) and a piece of absorbent cotton dipped in it and applied to the inflamed tumor during the interval, allays pain and discomfort almost like magic.

Should this treatment fail, as it may when the tumors are large and much inflamed, first make the patient go to bed and apply a large hot flaxseed poultice. Repeat as often as it cools. This will relieve the trouble, relaxing the tissues. After such condition is relieved use the Glyco-Thymoline as directed.

The paliative treatment for internal piles are much the same as given above. The constipation, if it exists, must be relieved, and habits regulated.

In the milder cases, three or four drachms of a 50 per cent. solution of Glyco-Thymoline (Kress) should be injected into the rectum by means of a hard rubber rectal syringe. Here it produces exosmosis, reduces the engorgement, softens the feces, stops pain and bleeding.

If the hemorrhoids are protruding apply large hot flaxseed poultices as above, and give a hypodermic of morphia if necessary. When the engorgement is relieved and the protruding part is replaced follow with the injection of Glyco-Thymoline as described above.

The following usually difficult case will illustrate results. A liveryman came to me with large protruding internal piles which could not be replaced. They had been down since the morning of the previous day. He would not go to bed and was compelled, so he thought, to attend his usual avocation. I prescribed calomel with the saline as described, and ordered the in-

flamed protrusion bathed in a 50 per cent. Glyco-Thymoline solution as described, every three hours, and a piece of absorbent cotton dipped in the solution applied to the anus in the interval. I did not see him until next morning, when I was able to press in place the protrusion. Now the injection, as described for internal piles, gave efficient relief. He lost no time whatever from his work, nor has he had subsequent trouble.

Dressing in Minor Surgery.*

By Frank H. Hancock, M. D., Port Norfolk, Va.

I have entered the field of minor surgery merely to record my experiences in wet dressings, not to discuss the several heads which under this text might be legitimate.

It is admitted, I believe, that surgical wound dressings should be absorbent; that they may be readily impregnated with medicinal substances, and that they absorb discharges.

Along this line authorities tell us that in wet dressings some covering impervious to heat and moisture should be used; as rubber dam, oiled silk. These are to retain heat and prevent evaporation.

It seems that such dressings are required in mashes, bruises, lacerations, contusions and abscesses.

Wherever extensive surfaces are infected, degenerating, sloughing, there oiled silk finds its use. There the surgeon wishing to overcome the lethargy of the affected tissues, hopes to do it through the influence of heat, artificially applied.

Remembering the devitalized state of the wound tissue, and the loss of heat from deficient oxidation, the surgeon attempts a corrective, and this he is believed to find in the impervious moist dressing. That the dressing is kept warm and moist by means of its oiled silk cover, is a fact that inspection will readily demonstrate.

The appearance of such a dressing after twenty-four hours exposure bears well its significant name of impervious moist dressing.

Soddened and soaked, the gauze, designed and used for its lightness, and the ease with which it may be cleaned, lies, a mass of matted dampness, upon the tissue it is intended to protect. Unable to evaporate, to pass through the impenetrable coat of silk, the moisture is in part taken up, and the shreds of the gauze swell to a point of dissolution.

Boggy and misshapen from weight this dressing adapts itself to the irregularities of the diseased area as a jelly fish does to indentations in the sand.

Limp, and supersaturated, it hangs its dead-weight upon the smouldering tissue as though it was soldered, so closely does it fit.

Every depression, fissure, and crevice, receives its complement of this stagnant mass, burrowing into the receptacles as the villi of the chorian fromdosum burrow into the cripts of the mucous membrane of a pregnant uterus.

The analogy, however, goes no further, for unlike the placental tufts, these moisture-laden, slime-coated, prolongations of gauze, receive nothing, by way of osmosis or otherwise, from the cripts into which they fit, or the field upon which they rest.

The gauze cannot appropriate the slough of the tissue, or absorb the excretion of the wound area, because of the occupation of its meshes, and the prevention of evaporation by an oiled silk cover.

This fact may be demonstrated.

Examination of a dressing twenty-four hours old will show the layer of gauze nearest the wound surface to be coated with a tenacious slime, the amount depending upon the character of the wound, while in the next, and succeeding layers, there can be detected no traces of putrefactive material.

I have particularly observed this point, and have in some instances seen this sloughing material adhere to the first layer of gauze as plastering does to a wall.

The effete matter cannot permeate a dressing already saturated, a dressing from which no moisture is allowed to escape. The moisture must stay where it is to form collections of miniature cess pools.

It may be remembered that while the application of oiled silk to such a dressing prevents the escape of moisture, it also makes the dressing itself impervious to the discharges of the wound—a point I wish to italicize.

The surgeon attempts to confine the moisture.

He must remember that in doing so, he absolutely stays the process of absorption, and defeats the very purpose for which his treatment was instituted.

On January 4th, 1898, I dressed the thumb of a man that had been injured the 11th of December, '97.

The thumb had been struck by a heavy hammer and was burst from the articulation to the distal end of the last phalanx; the internal lateral surface being involved.

It was wound in roller bandage, and underneath was a spread of oiled silk, so laid

*Read before the Norfolk Medical Society, March 14, 1899.

as to carefully envelop the folds of gauze which were in apposition to the wound.

The gauze heavily soaked in water had shifted somewhat—shifted as the stupendously weighted cargoes of ships, shift in response to certain positions of the vessel—and was giving rise, at the point of contact, to the most intense pain—pain produced by the accentuated pressure of this water charged mass.

Removal disclosed a slimy appearance of the coat nearest the wound, a condition to which reference has been made.

The wound looked putrid. The split had widely separated.

It seemed verily to have been fallowed from the combined effects of disintegration and the presence of a redundant dressing which it was required to support.

The lower segment involving the palmer surface of the thumb swung down; a space of from twelve to fifteen m.m. being between the upper and lower margins of the wound.

Stretched along the center of the gap was a putrid rope of slime, probably three m.m. thick.

Along the surfaces of the wound were dense masses of agglutinated pus, resembling in some places collections of frost upon red clay banks.

Beyond and to the radial side of the metacarpo-phalangeal articulation was a wound of bullet hole appearance.

The tissue was burst here by the terrific force of the blow, as in the more extensive wound beyond.

It had been bored out by infected material—material retained by the superimposed layers of water-logged gauze.

The appearance of the thumb throughout its whole extent was bad.

Infection was extending, pus rapidly forming was massing along the fleshy, or metacarpal portion, the whole of which was swollen and indurated.

The palmer surface seemed particularly affected. Pain was marked, the mere approach of the finger being productive of the most acute suffering.

The skin, from the tip of the thumb to the carpus, from the radial side to where it crossed the index finger, presented a seethed, soggy, whitish, bulky, appearance; *and this corresponded in extent and outlines to exactly the boundaries of the impervious dressing.*

Emphasis cannot sustain the weight I would like this sentence to carry.

The appearance was a map, as accurately portraying the dressing, as photographic rays portray upon a negative the object photographed.

The whitish porus look of the skin may be familiar, but its otherwise extensive appearance upon the loose skin, as the dorsum of the hand, is unusual.

It is due to the prolonged application of moisture, to the fact that the functions of the skin are destroyed, and instead of evaporation, instead of discharging the products of its own infection, it absorbs the moisture of the dressing above, and becomes the recipient of its own pus accumulation.

An incision was made over the metacarpus, through which some pus escaped.

The parts were immersed in warm bichloride, and a light dressing of gauze and cotton applied.

This routine was continued for several days, with the following results:

Pain had lessened—the patient finding it no longer necessary to express himself in tears while his hand was being dressed; the exqisite tenderness of the preceding week was gone; the whitishness of the first dressing, so distinct, so unnatural, had disappeared, with the limited exception of the marginal surfaces: the depression of the wound area, seen before, had become effaced, or the dressing—impression which so carefully mapped the lineaments of the oiled silk application was not now detectable; the thumb seemed no longer to reek in putrid moisture; its cut surfaces were not bursting with putrefective gasses, and the debris of decomposed tissue; the sagging margins appeared to approach each other, and the radical adoption of the amputating knife was less imminent.

The under surface of the dressing was not coated, as of soft plaster-of-paris. The gauze seemed to be fulfilling its part as an absorptive material, *and was equally affected throughout.*

The cotton was soaked—soaked as cotton some times is in front of an appendicular abscess, and the pus, if I mistake not, had in spots penetrated the roller bandage beyond.

For absorptive media could there be a more ideal dressing? Certainly it would seem that the results appear in imposing contradistinction to the oiled silk fiasco.

Here, the pus leaves the wound as it is formed, spreads through all parts of the dressing, is held in the interstices of the gauze, the intertexture of the cotton.

The dressing *imbibes*, as it were, and the wound is relieved of the presence of its own excrement.

In the other, or what we are taught the improved arrangement, exactly the opposite is true. *The dressing is a foreign boby, impervious and impenetrable.*

It drags, wallows, and tears the tissues,

bathes them in slough, and brings about a condition much resembling the appearance of swine immersed in quagmire.

Experimenting, I reapplied the oiled silk. There was a return to the old symptoms—a species of atavism which nearly cost me my patient.

The oiled silk was taken away, and the hand, with the simple aid of its natural functions, healed.

This, and other experiences of an almost similar nature, have led me to discard from my reportoire the impervious moist dressing.

Random Sketches.*

By I. W. Costen, M. D., Gatesville, N. C.

Feeling assured from the reputation and distinguished abilities of our brotherhood, that the science of medicine will be discussed with all competency and fitness, and that we will enjoy a rich feast.

With your permission, I will deviate from the regular routine, just a little, and present in my feeble effort a few Random Sketches. Every lineament of your bright countenances bespeaks a generous heart, and I feel that my boon is already granted. We call our proposed lucubrations, Random Sketches, and will be disappointed if we do not prove them such before leaving them. We hail this association, as the herald of a work, which is to do great homage to the science it is intended to promote, as well as a great benefit to the public. The entering upon which, we trust, too, will constitute a bright and eventful period in our own history, and from which great good will emanate.

Glancing over this assembly, we find some present who have long been laboring in the pursuit of medical knowledge, while there are others, like myself, it may be, just stepping upon the threshold of their profession. While our minds are being improved, our intellects expanded, I ask for all congeniality, and that attachments, the warmest and most tenacious, may be formed—such as cannot be broken by the common jars and discords of the present day. I am reminded, while contemplating my theme, of the great improvements that are rapidly developing in every phase of business. This medical body comes under that head. May the expectations it awakens in the hearts of its membership be realized, and as the bland sunshine diffuses its happy influence over the face of the natural world, calling forth new beauties, so may the influence emanating from this fraternity, awaken new energy in our efforts for extended knowledge.

That our people, the American people, *are* celebrated for an ingenious, inventive spirit, as well as considerable tact in developing their plans of improvement, and profiting by their advantages, many proofs attest. Notwithstanding our inventive genius, we are, nevertheless, fond of imported theories, and will encourage and receive foreign talent with much greater eagerness than we encourage home efforts. It is rather unfortunate, too, for American enterprise, that there is such a fondness for imported opinions, and a tendency to neglect home talent. Many of the useful inventions of the day have been made in our country, and it was only after controlling popular prejudices that they were rendered successful. In other instances, the eminence of foreign authorship has secured them success.

These last remarks were suggested while reading some extracts from a physician's diary, in which it was recorded that an eminent physician of Baltimore made some valuable discoveries relative to medical science, which were entirely overlooked by the profession, or treated with marked indifference. It was, in vain, that he endeavored to illustrate his position, which, however, to some was acknowledged to possess a degree of interest. In the course of events, the said discoveries found a passage across the Atlantic, and were examined and admired by a certain physician in one of the English medical schools, and he, not having the magnanimity to give credit to whom it belonged, in true piratical spirit, seized upon the subject and published it as his own, in one of the foreign medical journals, and having gained a high starting point, the matter was taken up and exhibited to the world as English property. Recrossing the ocean it was hailed in America as a valuable acquisition to the medical profession. The subject has been treated upon and is incorporated into late publications, credited, of course, to British authorship.

We are in the enjoyment of better days. We find that the productions of American genius will no longer be compelled to take a voyage across the Atlantic in order to be indorsed and commended before they can find currency in the land of their nativity. It is a very consoling thought that the science of medicine has made almost incredible advancement and improvement, although quackery does exist to some extent. Pretenders do spring up in many

*Read before the Seaboard Medical Association of Eastern Virginia and North Carolina.

places, and much mischief done; probably more than by imposters of other professions. We should not deem it strange, however, when we remember that in every branch of business, science, literature, and in everything, the public is imposed upon.

A century ago the "healing art," as it was termed at that time, was in a strange, confused state. In Europe, too, it contained every conceivably kind of practitioner, from the humble adviser in the suburbs, living and acting in the capacity of the grocer, selling his lotions or lucifer matches, and "giving" his advice for nothing—estimating it, probably, at its true value—up to the fashionable physician of the fashionable square, visiting only fashionable patients and prescribing the last fashionable remedy in vogue. In those days, too, the barber was the surgeon. At that time the whole country was flooded with medical quackery. They argued that if disease is a unit, that it should be treated by one general systematic course—either bleeding, opium, and calomel—the treatment of the regular; or lobelia, pepper, and steam—the steamers or quack's remedy.

We have only to revert to those days of barbarism and brutality, which robbed earth of her families, and time of his generations, ere we can with fullness, appreciate our own period. A night of profound and impenetrable darkness was shrouding much of the world's glories. The arts and sciences reposed in an, almost, undisturbed slumber. The mind groped in vain to find truth, following the glimmering "ignus fatuis" of error. The night was not to last forever, however. The sun of knowledge ascended the horizon, science burst the bands which had so long retained her. The arts awoke from their slumbers. Science and knowledge never fail to shed a hallowed glory over the ages in which they have existed. There is no profession in life which has not received benefit from scientific research. It has enabled us to detect the deadly poison which lurking, like a serpent, often among the most beautiful of nature's foliage, and to counteract its deleterious influences. "By its aid, too, the mechanic and artisan govern all their operations by rules, as unerring as the laws of nature herself; and even the tempest tossed marriner is often saved, from a watery grave, by the simple, yet, scientific discovery of the life preserver.

Yet, why should I attempt a survey of the immense regions of learning—I cannot do it. Still it is said "that the wisest only stand on wisdom's threshold." If the interior of her temple is yet to be explored, the veil of her mysteries yet to be drawn aside, wherefore, then should we despair, or be discouraged. Native genius has flourished upon our own soil, and our own people may justly claim equal honors with the oldest nations of Europe. Behold a Fulton "rendering steam subservient to the wants of man." Think of Adams, Jefferson, Rush, Hamilton, *et ed omne genus*, sublimely irradiating the dark provinces of mind, with the bright and sparkling rays of light and intelligence. It is at our own doors, as it were, that we view the mighty changes which have been accomplished within the last half century, by the powers of education as applied to the arts and sciences, and even in the more ordinary avocations of life, we find abundant reason for congratulation and joy.

When we remember that every age stamps its impress, indellibly, upon all subsequent time, and in no way does a nation make itself felt, so surely, as in its literature. This should serve to stimulate us to nobler efforts in our profession.

The Radical Cure of Writer's Cramp and Other Occupation "Palsies."

By J. H. Monell, M. D., Brooklyn, N. Y.

In the interest of medical progress will you kindly publish this letter in your valued journal, for the information both of Specialists and of the great body of general family practitioners who are most apt to see occupations palsies or "lame arms" in their advanced stages when "rest" is useless and a true remedy is important.

Of writer's cramp Tyson says: "Curative treatment consists chiefly in '*rest*' promptly adopted. Mechanical devices have not accomplished much." He refers to the use of electricity by Berger, Benedict, Eulenberg, Erb, Onimus, Meyer, Althouse, and Gowers, and adds that his own experience has not been encouraging.

Gowers has "little confidence in electricity."

Osler says: "Rest is essential; no measures are of value without this. In very obstinate cases the condition remains incurable."

Duchenne with "faradism" never cured a case.

Dana states: "The most essential thing is rest." He mentions the usual text-book recommendations and places electricity "second to massage."

Poore's "combined movements with galvanism" are often cited. Shaw describes the disease, but omits treatment altogether. A marked sameness runs through the other literature of the subject as regards treat-

ment, and the impression is general that *decisive* and scientific treatment is not known, the usual advice being to "rest," "change vocation," or "try massage or electricity."

As opposed to this general impression it may be stated that for many years I had writer's cramp myself and began a persistent experimental research into its proper treatment which has involved records of more than five thousand electrical applications in between one and two hundred cases, mostly telegraphers. I soon learned to restore arms in commencing stages. In three years I was able to feel confidence in "curing" an advanced stage, but it took a long while. Early in 1898 my continuous study and greatly increased experience enabled me to do much better than formerly, but I still sought methods of conquering extreme cases and reducing the time required. By January, 1899, these methods were worked out. Electricity is the remedy tested and found successful, but instead of employing it with reference to described "galvanizing," &c., I utilize clinical electro-therapeutics and all currents and dosage, to the end of producing *indicated therapeutic actions* within the tissues. That is the sole secret of success. A complete *radical* and lasting cure is, therefore, demonstrated to the medical profession. Every case of writer's cramp, telegraphers paralysis, pianists wrist drop, ball players lame arms and other varieties of "occupation palsies" is curable in *any* stage, and in *a very reasonable time* if not complicated by some other disabling disease that is not curable. The lapse of years confirms my results, and time has not only confirmed but *improved* them, and to anything I have written on this subject in the past I must now add that my results are more certainly and more quickly obtained than before.

The indications have become better understood and "empiricism" has given place to an accurate plan of treatment which practically restores every case.

To any physician enclosing stamp I will be pleased to forward a reprint of my article (giving fuller details) published in July, 1898.

865 Union Street.

The Ultimate Results of Mechanical and Operative Treatment in Hip Disease.

Drs. Gibney, Waterman and Reynolds have published the results of the study of 150 cases of disease, on all of which personal examinations of the patients had been made. The article says the Boston Medical and Surgical Journal, gives a series of tables, in which the shortening, its relation to abscess, the amount of deformity and the necessary correction of deformity is compared, and also the relation of mechanical and operative treatment. Of the 150 cases, 107 were cured, 25 under treatment, 7 advised readmission for correction of deformity, 11 deaths. The article is a valuable contribution to our information in regard to the later stages of hip disease. The following deductions are given by the authors:

Hygienic and constitutional measures exert a powerful influence in the control of the disease.

The early diagnosis of hip-joint disease represents a very important factor in attaining a successful ultimate result.

During the acute stage rest in bed, associated with the usual mechanical appliances, is preferrable to ambulatory treatment.

In the first stage it is essential to procure absolute immobilization by fixation and traction (extension), and also to furnish protection to the joint.

In the second stage the deformity must be corrected, and operative procedures resorted to if mechanical methods fail after a reasonable length of time—usually six months.

Early correction of the deformity is advised, using as little force as is consistent with the individual case.

Adduction with flexion is the deformity which most frequently calls for correction.

Flexion without adduction rarely requires correction.

Forcible correction, followed by fixation, should be tried before attempting reposition by femoral osteotomy.

Where there is absolute anchylosis or only a few degrees of motion, and all manifestations incident to an acute condition have subsided, the operation of subtrochanteric osteotomy for the correction of the deformity is indicated, supplemented, if necessary, by tenotomy, myotomy and fasciotomy.

The injection of various chemical substances into abscesses and sinuses has not proved beneficial.

When an abscess does not disappear after repeated aspirations radical operative procedures are clearly indicated, to be followed, if necessary, by resection of the joint.

When the disease is complicated by pus formation in young children, most especially in the first years of life, there is less need of fearing a poor result than in adults, as the former frequently recover with a movable joint, a condition which may be explained by the fact that the head of the bone at this time is cartilaginous.

Long-standing and profuse suppuration retards the process of reparation and gives rise to a grave prognosis; furthermore, the absorption of pus is associated with great danger and frequently results in acute septicemia and amyloid degeneration.

Treatment should be continued not only during the acute and subacute stages, but also during the convalescent period.

Internal Application of Antiseptics.

One who watches current medical literature cannot fail to be impressed with the enthusiasm with which the profession turns to the use of internal antiseptics. The changes are rung on antiseptic inhalations in phthisis, antiseptic injections in gonorrhea, and antiseptic drugs in treatment of typhoid fever. Medicine in one of its recent issues comments on this as follows:

The dismal failures attending the use of antiseptics in the treatment of the tuberculosis of the skin and of the larynx seem to be devoid of potent analogy, when the tubercular process appears in the lung. There is no reason to believe that lung tuberculosis is different in its pathological anatomy from that of the skin, excepting in so far as lung tissue differs in its anatomical arrangement from that of the skin. There is no reason for believing that the process there is more easily reached by the direct application of antiseptics than it is upon a free mucous surface such as that of the larynx.

In the treatment of gonorrhea changes are rung on various antiseptic injections with tiresome frequency, yet all writers practically agree that the gonococcus is not free upon the epithelial surface, but is found deep in the epithelium, beyond the direct action of antiseptics.

The difficulty of making an ancient ulcer of the leg aseptic has been recognized ever since we have had exact knowledge of the relation of infection to these conditions. There is no reason for believing that a typhoid ulcer of the intestine could be more easily disinfected if it were amenable to direct application of antiseptics.

The above is not written with a view of setting up the opinion that antiseptics are of no value in the treatment of these infections. It is possible that they may be of service in aiding the struggle of the normal tissues in combating an infective process, and they may aid in preventing the extension of such infection to healthy tissues. But it is written with the idea of combating the commonly exploited notion that such substances act directly upon the germs of disease and that they act as antiseptics in the same way that the term would be applied to describe the killing of the anthrax bacillus in a test-tube with bi-chloride of mercury.

Salt and Bright's Disease.

It has long been suspected that salt used in excess might be a cause of nephritis. The kidneys are taxed to eliminate a portion of it, and the strain, if kept up a long time, is more than they are able to bear. Some studies recently made seem to confirm this opinion. That is to say, too large an amount of common salt in our food acts as an irritant, and may be one of the factors in causing inflammation of the kidneys. Those who take this condiment in large quantities should bear this in mind and take less of it. The salt habit is so strong in many persons that they can enjoy no food not highly seasoned with it. This is certainly a hygienic error. With a well-chosen diet, no great amount of salt is required, and the natural flavor of many things is lost when much of it is added. Especially is little salt required when a large amount of flesh is consumed. Carnivorous animals do not require salt at all. There are races of men who live mainly on animal food, and though salt abounds around them they do not use it. It is the vegetable-eating animals and races of men that seem to require salt as a part of their diet. Bearing this in mind, we ought to be able to compose our food and condiments more scientifically.

Treatment of Eclampsia.

Dr. B. C. Hirst (Medical Record, March 4, 1899). During the attack itself, administer chloroform. As soon as the attack passes off give hypodermically fifteen drops of the fluid extract of veratrum viride, and a drachm of chloral in solution by enema. Place upon the tongue two drops of croton oil diluted with a little sweet oil. Induce diaphoresis by hot packs and extra bedclothing. Inject by gravity under the breast a pint or more of decinormal salt solution, or several quarts of the solution by enema. If convulsions recur, repeat the veratrum in five-drop doses if the pulse is quick and strong. If the face is congested and the pulse full, employ venesection enough to reduce the pulse. The chloral may be repeated during the attack two or three times. Use stimulants if the pulse is weak and rapid. If the convulsions cease and the patient is in a stupor but can be aroused enough to swallow, give dessertspoonfuls of concentrated solution of Epsom salts every fifteen or thirty minutes until free catharsis takes place. These condensed directions should be carried in the pocket-case of every obstetrician.

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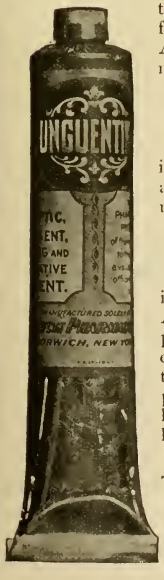

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THE

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LIFE EXAMINATIONS AGAIN.

We recently had occasion to inquire into the causes for defective certificates of life risks as shown by the avowedly high mortality of insured, especially from chronic diseases, soon after insurance is taken. We justly eliminated dishonesty on the part of the examiner as a frequent cause; also incapacity, although that is doubtless more prevalent among examiners than the former. It seems certain, also, that such examiners are found not seldom among good, successful practitioners. They simply cannot see the relation of things. They cannot understand why a well man should not be entitled to the benefits of life insurance, regardless of the health of ancestors and collateral relations, and so they do not probe deeply into the family history. They may record one vital event, like consumption or apoplexy, and leave unrecorded related vital events of equal importance, or report them casually as typhoid fever, kidney disease, and the like. More commonly they accept unchallenged the stereotyped answer of the applicant, "don't know," and they might fittingly add for themselves, "I don't care."

But this kind of examiner belongs to a relatively small class, like the other; and, like the other, cannot be helped or reformed by advice or censure.

We are speaking for that large, preponderating class of examiners, the honest, capable, if sometimes careless, ones; and we place the stigma for defective certificates where it belongs—on the applicant—though not forgetting an admonition to the careless examiner. In general terms it is this: Suspect an ambuscade from every applicant for insurance. Many of them will surely be lying in wait to deceive you. There are countless men who would not wrong a neighbor for the world, who will yet cheat the government or a corporation without remorse. So there are men who never lie till they apply for life insurance, and then the truth is not in them. They will lie both by evasion and direction. They will say they are "laborers" when they may be saloon roustabouts. They will say they take stimulants "seldom," or "moderately," when they may be full of all sorts of drinks all the time. They will say they are never sick, or only with a "little cold," or "dyspepsia," too trifling to remember, when very likely you have yourself attended them in some serious illness.

They "don't know" the causes of death of dead relations, nor the duration of last sickness. They will make a "fever," or "blood poisoning," do duty for a well known tuberculosis. They will make a "touch of the grippe" cover up all sorts of grave troubles, or soften the blackness of the list, when tuberculosis has already been admitted.

Ignorance of remote family history may be genuine, particularly of those dying in the old world, for correspondence lags; and by-and-by ceases. Native Americans do not always know, although their far ancestors may have been colonists of Jamestown or Plymouth Rock; but they always know something, and that something should always be drawn out of them. The flippant Frenchman who said that few Americans have grand-fathers, may have been an examiner for life insurance, but even he could have exhumed many a grand-father by patient digging. We must help these agnostic orphans to construct a family tree, and when it is raised we must scrutinize closely its roots and its branches.

Most application blanks are sufficiently full, if we but get answers to all questions. This is important. Don't answer a question with a dash. If the question seems unimportant, or seems a repetition, get an answer to it. That information is needed in the records of the home office, even if it does not affect the individual risk. Often these questions recall diseases that the applicant has forgotten, and they are, therefore, a help to honesty. At the worst the dishonest are left to the resource of plain lying, and even these are sometimes admonished by the casual hint that the validity of their insurance depends on the truthfulness of their replies. On the other hand tactful adroitness will often draw out the reluctant truth where a bolder method would be baffled or beaten. This applies not only to personal and collateral diseases, but to the commonest questions of fact, e. g., as to whether there has ever been a rejection of a former application. On all points we must be patient but thorough inquisitors, if only

to avoid the mortification of a too easy deception.

Specific enumeration of the many errors of the deceiver, and omissions of the examiner, has been purposely omitted for lack of space; but one of the former may be specified to bring out in brilliant illumination a virtue as rare as it is tender and even romantic.

Venereal disease is almost never admitted. Applicants will deny this who have been treated for it by the very examiner who is questioning them. If this is perplexing what shall be said of the candor of one who admits that he has had it, who wants the insurance for the protection of his family, but who would rather go without it than have his wife see the cold historical fact, in black and white, in his contract, when she comes to collect his death benefit?

Returning to the place of starting: The present high mortality of all kinds of life insurance risks is a result not mainly of defective objective methods of examination, as is too often charged, but from the subjective history, particularly that of family morbidity and mortality; and this is nearly always to be charged to the applicant and not to the examiner. When some infallible method of extracting the truth from a reluctant or dishonest witness can be found there will be fewer deaths from consumption, Bright's disease, and the like, dating but a few months or years from that of the policy, and there will be far less undeserved obloquy resting on the medical examiner.

WHY IS IT?

When our nation decided to go to war with Spain, and a call was made for volunteers, the one thing which we made a matter of congratulation was the supposed fact that sanitary science was nearly in a state of perfection. Surgery was no longer the haphazzard matter of experiment, which characterized it formerly, but a thorough knowledge of antiseptics and the germ theory would reduce the per cent. of army losses to a minimum. The surgeon of the sixties did the best he could, of course, but under the new order of things the large death rate of all former wars was not to prevail in this one.

Well, the army was readily formed and organized, and finished the war with honor in one hundred days. What did we find as a sequal? A howl in every newspaper in the land about the murderous unsanitary conditions of all the camps. Fifty thousand soldiers sick in the hospitals; sick soldiers dying by the hundreds for want of the commonest remedies; charges of inefficiency, drunkenness, and neglect against many medical officers; governors of States demanding that their regiments be disbanded and sent home for care and civilized treatment.

Is this because politics dictated too many appointments? Is it because the greed of contractors has emulated the corruption of the Turk? Or might it not be true that modern sanitary and surgical science is yet far from perfection?

The old army doctor had few remedies. He knew nothing of the germ theory. He had absolutely no known aseptics; but he went to the front with his men and used his old fashioned judgment in caring for them, and it is a fact that cannot be denied that there were greater manifestations of righteous indignation against the medical department of the army in the last thirty days of the war in Cuba, than could be heard during the whole five years of our late unpleasantness.

Perhaps it would be well for the modern medical optimist to ask himself if the old army surgeon, even if he were ignorant of the nature of the streptococcus pyogenus, might not have filled a place in army affairs, which too unfortunately is vacant.

ANTITOXIN.

Since commercialism is to rule the destiny, apparently, of the great discovery of antitoxin in this country, we are brought to realize fully the influence of corporate greed.

In the granting of patents to the foreign manufacturers, the stigma of this peculiar trait of humanity falls upon the science of medicine.

While the immortal Jenner rests upon the high pedestal of honor, to which the science of medicine, and the gratitude of humanity have elevated him, we may truly deprecate the disgrace of witnessing in this modern era of medicine, the lowering of true scientific discovery to the base and ignoble interests of manufacturing chemists.

It is not possible that the medical profession will submit tamely to this disgraceful usurping of their rights, since the discovery of, and application of antitoxin in the treatment of diphtheria has been the result of the scientific labors of so many of those eminent in the profession.

The use of antitoxin having been followed by such brilliant results in this country, as a curate agent, and as a preventative has no doubt led enthusiastic physicians, to rely wholly upon it. Although the granting of patents may not seriously interfere with the

individual rights of physicians in its use, there are certainly some reasons to believe that in the treatment of diphtheria the adjuvants, which may be used in connection with antitoxin should be borne in mind, and in treating every case of diphtheria these remedies should be used. As nutritious food and sufficient diluents are very necessary in all cases where the vitality is lowered and the system has to eliminate diseased products.

When the soreness of the throat is sufficient to prevent the swallowing of nourishment, a remedy that will annul the pain and allow food to be taken, even temporarily, does help.

In cocaine we have such a remedy. Applied with a swab or spray it benumbs, to a great extent, the soreness of mucous surfaces, irritated by the process of swallowing. While we do not have a *sine qua non* in antitoxin for the treatment of diphtheria it has lessened the mortality largely in curable cases, preventing to some extent, and curing a larger per cent., than any other known remedy when applied early.

Of the various sequelæ they are the same as of yore, and require systemic and systematic treatment at the hands of the physician. Further experimentation may reveal methods of preparation and modes of application that will give it the pre-eminence which the most enthusiastic adherents could desire.

RECTAL IRRIGATIONS IN DISEASES OF CHILDREN.

It is peculiarly striking how often some old-time practice is again revived in a new and taking form, and at once is found to fit many indications that were before regarded as perplexing. Such may be truly said of *rectal irrigation*. There is absolutely nothing new in the idea of its medical working, for the rectum has been used for medication from time immemorial, but the *technique* of its use has gained for rectal irrigation a field that broadens with such experience of its results. Cantani recommended it for cleaning out the large intestines in Asiatic cholera some 15 years ago, and since that time its application to other disorders has so rapidly extended, that today, few medical journals can be found that do not contain, in some issue, a reference to its use.

Evidently rectal irrigation has proven a successful means of giving relief in the field of its fitness. It can be used with either hot or cold water, medicated with mild and inoffensive antiseptics, such as boric acid, peppermint, soda bicarbonate, quinine and chammomile, or with astringents and alteratives as nitrate of silver in weak solution, tannin or sulphate of copper. Perhaps the most valuable menstruum for rectal irrigation is the decinormal salt solution, containing one drachm of sodium chloride to two pints of boiled water, employed at about a temperature of 105 deg. to 112 deg. F. A fountain syringe is, perhaps, the readiest apparatus for general use, and while the colon rubber tube was formerly found useful, the shorter tube made of either hard or soft rubber and also of metal, providing for a recurrent flow, as devised by Kemp, of New York city, will now be found more effective and almost perfect, when proper attention to its use is regarded. The secret of this is to have the pelvis of the patient elevated to the highest angle possible, while laying on the side, when the tube can be introduced the whole length, even in infants, sometimes dropping into place without the slightest force being used.

It is in certain disturbances peculiar to children that rectal irrigation as thus presented is most happily adopted. In *convulsions* it affords relief most rapidly, the child often falling asleep before the irrigation is completed. It is more specially prepared than the hot bath and will clean out the lower intestine at the same time it exerts its sedative effect.

In *collapse from cholera infantum* the hot rectal irrigation to the extent of one or two quarts of decinormal salt solution will restore the peripheral circulation and relieve renal suppression, besides washing out all decomposed intestinal detritus. In *acute dysentery* it keeps the mucous membrane clean, relieves pain and prepares the way for the local use of bismuth or quinine with rapid success.

In ordinary attacks of severe *intestinal colic* from acute or chronic intestinal indigestion, it acts with magic promptness, and even in *shock from hemorrhage* it will revive the patient until intravenous infusion can be used.

The great advantages of the hot salt irrigation may be considered to be its inoffensiveness towards the mucous epithelium, causing no irritation or denudation of the mucous membrane, and the readiness with which it seems to be absorbed into the capillary blood-vessels without disturbing the relations of the red blood corpuscles. In this latter manner it refills the partially emptied blood-vessels, consequently restoring the normal blood pressure.

In *summer diarrhœa*, with high temperature, cold rectal irrigation, with the decinormal salt solution at about 80 deg. F. to

85 deg. F., will reduce the body temperature decidedly.

Once or twice daily is often enough for their employment, and frequently only one or two irrigations are sufficient to effect a cure.

A STATE OF THINGS.

It is rather interesting to consider the position of a physician who has the misfortune to be called to a case which develops symptoms of small-pox. It is self-evident that the patient is to be pitied. If it occurs in a city too small to support a regular hospital for contagious diseases, the suggestions for his management will vary from shooting him to a shanty in the suburbs. It is not to his predicament, however, that we would call attention, but to the less manifest troubles of his medical attendant.

They begin with the question of reporting the case to the health board. In all probability, in these days of quite general vaccination, it is a case of varioloid. There is no history of contagion—volunteered—and the symptoms are irregular. The medical student sticks a pin into the fact that a patient with excruciating backache should be suspected of having variola; unfortunately the first case of it he meets may not complain of backache at all. What he does have is a patient with fever, developing a suspicious rash. What about reporting it to the Board of Health?

It is a clear case of damned if you do and damned if you don't. You hardly expect the gratitude of the patient or his family. If the diagnosis should be erroneous, human nature is not yet up to the plane of forgetting it the next time any members of the family are sick. Reporting an undoubted case will bring upon you the maledictions of the business men because the trade of the town is seriously injured at once. The one case is magnified to twelve in the neighboring towns, and farmers dare not drive through the place.

Nevertheless, as a conscientious physician you cannot do otherwise than do your best to preserve the health of the community; at your next visit a red card is on the house. You feel repaid for the lamentations of the family, and the bad feelings of the business men by the satisfaction of knowing that you are a public benefactor, and that you have by your timely warning kept the dread disease from claiming many other victims.

How does the public express to you its appreciation and gratitude? In all sorts of fashions, giving you glimpses of human nature you had not before experienced. A respectable number see nothing surprising or worth mentioning in the whole matter. They expect, of course, that you always do so. Some friends continue to come into the office and you feel that they will stand by you though you are in trouble. But certain ones will maintain that it is shameful that you go on the street after coming out of a pest house. Many will back away from you if they find themselves by chance in proximity. Your practice will be almost limited to the few who have not heard that you are the small-pox doctor. You can not play whist in your club, you can not go to church, you can not go anywhere for there are sure to be some nervous bodies there whose misery would spoil your comfort.

Of course you have changed all your clothing and left your old suit to be burned; you have scrubbed up with bichloride but you get to have a very active sympathy with the lepers of Palestine. However, this is all a part of a doctor's life, and the moral is that you ought not to have been a doctor.

You are finally able to cheerfully answer all sorts of fool questions about small-pox, and to be contented with your one patient, but you do finally lose your temper over a thing unworthy of your notice. Somebody who objects to the compulsory vaccination of his children proclaims that the whole affair has been gotten up by the doctors who have faked a case because their business got dull.

THE CURETTE IN SUPPURATIVE OTITIS.

While some cases of suppurative otitis media recover under any or no treatment whatever, there is as a rule no class of cases that give the physician more trouble and worry. All chronic cases which are not benefitted by the ordinary routine treatment or if benefitted are not cured are proper subjects for the curette. Each operator must choose for himself the shape of instrument to be used. I find Denche's curettes suit me the best as they are small and only a small instrument can be properly manipulated in such confined space. Then they are so shaped as to reach the margins of the cavity all around.

When a case has gone on a few weeks with little or no improvement under ordinary treatment, or where dead or uncovered bone can be felt I resort to curettement. The small straight curette is used for all that part of the cavity exposed to view. Then the curettes bent at an angle are called into service and the remaining part of the cavity thoroughly scraped, care being exercised to remove all thickened membrane wherever found. The ear must be thoroughly cleansed, both before and after the operation.

Saturated solution of boric acid in alcohol is then injected into the cavity once a day and the patient is instructed to use the syringe with any simple antiseptic sufficiently often to keep the canal as free from secretion as possible. I would not recommend the curette as a routine treatment any more than I would ossiculotomy, but I would say this, an early curettement will save more than one ossiculotomy and mastoid operation as well and give just as good results as far as hearing is concerned, besides saving the patient the worry in thinking of the graver operation and the danger in undergoing it.

THE TITLE DOCTOR.

The title "Doctor" has so long been associated with the medical profession, that we have come to look upon it as the special property of a physician, and when any one else is called Doctor we immediately begin to enquire into his right to the title. No one ever questions the right of a Doctor of Philosophy or of Divinity to its use, but there are other people often called Doctor, who cannot show so good a claim to the title in its original sense.

The term "Doctor" means, as we all know, "learned one," and was originally conferred by the colleges on men especially well qualified in certain branches of learning. This signification implied a superiority over the generality of mankind, and as such received universal respect. To win the confidence of the public, it became almost necessary that a physician should first study long enough to obtain the title of one "learned in medicine." In this way the title became so common among physicians that the laity lost sight of its true significance and began to use the terms as synonymous.

Finally "Doctor" began to be applied to anyone who dealt in physic or in drugs. Thus different classes of people, who would certainly never think of calling themselves learned, have been termed Doctor. First came the dentist, then the veterinary, then the optician, and finally the druggist. Sometimes even the bartender and the butcher rejoice among their friends under the pseudonym of Doctor. But, one may ask, have not these men as good a right to the title as the physician? Are they not as skilled in their work as he in his? This, however, is a misconception of the meaning of the term. The title "Doctor" does not mean *skilled*, it means *learned*. It applies not to the man with well trained hands, but to the man with a broad and cultivated mind —a mind raised to a level well above the ordinary. Viewed from this standpoint the title should not be applied to these "professions," though individual men in them may be learned in directions beyond the scope of the class to which they belong. But it may be asked, do then the physicians as a class deserve the title of "learned?" This is indeed a hard question for a physician to answer. We can say that all, or almost all, have degrees from some college stating that the title of Doctor of Medicine has been conferred upon them. If these college degrees are all that they claim to be, we can answer the question in the affirmative and establish before all men a good right to the title of Doctor in its original meaning. Now how does the thinking public, and how do our law-makers regard these degrees? The law regards the degree of Doctor of Medicine as of so little value, that it is not even considered in granting a physician's license. The man without a degree, who has passed the necessary examination, is the perfect equal of him with a college title, and the former is now dubbed Doctor as well as the latter. Thus the true meaning of the word has been completely pushed to the side.

If this is the case, what has the title "Doctor" come to mean? Has it any real significance? As we have seen, its original meaning of learned one is now rarely even considered. To the people it is merely a short term for physician and in that sense it carries much meaning with it. The physician himself will after a time be forced to view the term Doctor in this way. But having set aside its true meaning of "learned one," he will be unable to contend that uneducated people should not be addressed as Doctor, but must be willing to share with anyone the title which he now so jealously guards.

COMMERCIALISM IN MEDICINE.

Of all quacks the one described as above is the most reprehensible. The man who stands on the inside of the gate into the medical world and is there for the cold cash he can get out of it is an enemy both to the world and to the profession he dishonors. The man who keeps a case of astigmatism for instance, coming to his office every day for four or five weeks, running up a big doctor's bill when he could prescribe just as well in as many days, is no better, no more honest or honorable than the highwayman who holds up his victim in a dark alley and demands his money or his life. My sympathies are rather with the highwayman. I instance a case as above, because it seems to me there is more of that kind of quackery in eye work than in any other department of medicine. Sight is

precious, but that is no reason one should trade upon it just as the merchant does in dry goods or the speculator in stocks.

We expect nothing better than commercialism from the lost-manhood specialist who advertises in the daily press of all our large cities, but one does expect more from those of our own number who pretend to be honest practitioners of medicine. To this same class belongs the man who represents a case as very grave when in reality it is far better than it looks to the eye of a layman. This man trades on his patient's susceptibilities, and this is not honest. A physician should in the nature of things be an honest man, and an honest man will not be drawn into commercialism in medicine.

WHO IS RESPONSIBLE?

For the last several mnoths the whole country has been busy finding fault with the way in which the Spanish war was managed, and in trying to shove off the responsibility upon some one else's shoulders. Every one has to acknowledge that things did not run as smoothly as they should have, and that there was much suffering which might have been prevented.

Still I am inclined to believe that we should blame ourselves as a nation, rather than make a scape-goat of the administration or of any especial officer or officers. Never was there a nation more thoroughly unprepared than ours, when it plunged into this war; and never was there a people which expected more of its soldiers. Now, when the war is over, we are surprised that there was mismanagement, a mismanagement which any one without the conceit of the average American would have foreseen to have been almost inevitable, so hurriedly were we obliged to prepare ourselves.

No department of the army has been more blamed than the medical corps, and, though this abuse is often deserved, the fault seems to lie more with our general system than with the men. A physician, absolutely without military training and knowing nothing of the daily routine of a camp, is made regimental surgeon and is expected to understand and perform all of his military duties by intuition. This is not all. The volunteer colonel may know how to drill his men in an armory, but he probably knows but little more than his surgeon about arranging a sanitary camp, and very naturally the two together make a mess of it. Another difficulty which confronts the surgeon is that our volunteers are not used to discipline. They do not recognize the necessity of following the regulations, especially those in regard to keeping themselves and their camps clean. Often, too, they have known their surgeon in private life and look upon him as most people look upon a physician, as a person upon whom they can call at all times, and who must do all they require of him. Under such conditions, is it surprising that the men should complain of the surgeon who has tried to do his duty, or that sickness should have broken out in the camps?

ARMY MEDICAL DEPARTMENT.

There are few if any papers in the country that have not criticised the conduct of the Army Medical Department, but they all seem to confine themselves strictly to criticism. It is very easy to criticise, but much harder to find a remedy. As so much fault has been universally found with the Medical Corps, a suggestion here may be tolerated.

It is generally conceded that a very large proportion of the difficulties experienced could have been avoided if we had had trained officers for our militia. This is the case in all branches of the service, but markedly so with the Medical Corps. Now is there no remedy for this lack of training, no way to prevent a recurrence of the difficulties due to it?

The men themselves are capable enough and generally well able to take care of sickness under ordinary conditions. But in a camp everything is new to them, and it naturally takes a long time for them to get into that routine so necessary for a successful performance of their duties. What they need is some previous training to familiarize them with their surroundings and their work. If the Government would yearly take from each State from two to five recent medical graduates (the number being fixed according to the State's population), and give them a six months training as medical officers, we would soon have a number of surgeons skilled in routine army work who could act as surgeons in our volunteer regiments. It would be a comparatively easy matter to get the necessary number of young men to serve the six months, say with the rank of acting second lieutenant, if during that time they were paid a salary large enough for their support. These men should pledge themselves to act as surgeons in the militia of their respective States for, say, five years. For another five years they should be subject to call in case of emergency, but otherwise free from military service. After this they would be entirely free. The duties of a volunteer surgeon in time of peace would not be onerous, nor would they interfere with private

practice. Indeed the position should be of great help to a young man just starting into practice, as through it he would be brought before the eyes of the public. The six months' service as an army officer should be both pleasant and profitable. It is certainly considered so by the German physicians, all of whom must thus serve.

The government, too, would not suffer from this arrangement. These men could be made use of as assistants during their six months of training, and from them, by means of a competitive examination, surgeons could be selected for the regular service. It is not meant that they alone should have the privilege of coming before the Examining Board, but their previous experience should give them some advantage over men who had not thus served. Then there would be throughout the country a corps of trained men directly under the influence of the Army Medical Department though members of the State Militia. Thus we would obtain a body of men in whom the public could put confidence and who would be raised above the sphere of political influence. These men acting as Militia officers would combine the experience of the private practitioner with the fundamental training of the army surgeon.

We all agree that some change is necessary to make our Medical Corps efficient. The improvement cannot be accomplished in a day. So let us start now to remedy its most glaring faults, so that we will not be again caught with such a lamentable lack of preparation as when the last war broke out. Let us keep in mind the motto, "Pace para bellum."

UNION OF MEDICAL MEN.

The abuse of hospital privileges and lodge practice has reached such an extent in our large cities that, to put it mildly, it is seriously affecting the income of nearly every physician whether or not he is connected with hospital or has a lodge practice, cannot be gainsaid, and strange as it may seem the abuse continues to grow through the assistance and co-operation of some of the ablest men of the profession, notwithstanding most of the leading medical journals of the country have repeatedly called the attention of the profession to this condition of affairs. The reason for this is because no one has suggested a proper solution of this difficulty. Dr. D. L. Walmsley, in a paper read, recently before the Detroit Medical and Library Association, suggests that the profession become more closely united in an organization whose sole purpose shall be to further the financial interests of the profession, and in this way would do away with these and any other evils which tend to injure or impoverish the profession. He does not advocate the doing away with hospitals or the gratuitous treatment of the worthy poor, but the proper regulation of them through the united profession, and thinks we may learn many useful lessons from the various labor organizations. This suggestion seems like a very rational and business-like way of handling the difficulty, and if once the one hundred thousand physicians of this country were properly organized, what a powerful influence they would be; then, instead of being the laughing stock of wilely politicians and business men, they would be in a position to demand their rights whenever their interests were being sacrificed, either for the glory of the over-zealous philanthropist, or for the pecuniary benefit of the greedy stock companies. Such an organization would necessitate a great amount of time and labor to make it effective and would seem to be an impossibility, but strong organizations have been effected among laboring men where the difficulties to overcome were much greater, why not among the medical men.

COCAINE HABIT.

Fifteen or twenty years ago the careful and conscientious physicians began to sound the alarm and to caution the profession against the indiscriminate use of opium and its alkaloids, and through their efforts and with the aid of the new coal tar derivatives, we have many less chronic opium users to-day in proportion to the inhabitants than at that time. Now there is a new danger, and one that is much more serious in its results than the opium habit, and that is the cocaine habit. As physicians were formerly principally to blame for the opium habit, so they are to-day very largely to blame for the course of the cocaine habit, and it is time the profession awoke to the danger and stop putting the remedy in the hands of their patients, or writing prescriptions containing cocaine. Many of the patent medicines advertised for the cure of catarrh contain more or less cocaine, and even in our medical journals we frequently see recommended for treatment of hypertrophial turbenated bones snuffs and sprays containing cocaine. This is all wrong, though it may give temporary relief, it often aggravates the difficulty, and causes the cocaine habit. Since druggists as a rule refill prescriptions, physicians should be very careful about writing prescriptions containing cocaine, and so keep it entirely under their control. The South seems to be in greater danger from the co-

caine habit than the North, and the public's attention has been directed to the danger from the fact that druggists were selling large quantities of cocaine to the negroes done up in five and ten cent packages, and as a result crime was very much on the increase. This has caused two States, Louisiana and Texas, to enact laws regulating the sale of cocaine, which would be a wise example to foliow in every State, then with the co-operation of the physicians it would be a comparatively easy thing to check this growing evil.

MENTAL EXPECTANCY.

In his address in the section of medicine at the Denver meeting of the American Medical Association, referred to in the July number of this Journal, Dr. J. H. Musser made use of the following language: "Drugs have no doubt an action in health and disease. Their use may be of advantage, but usually are not necessary. Some say we are robbed of the power of mental expectancy if drugs are not given."

This doctrine of mental expectancy is by no means a modern one. Old doctor Denton, of the chair of Theory and Practice in the University of Michigan in 1858, was wont to give us a lecture on typhoid fever which would be a revelation to modern medical students. After carrying his patient through the preliminary stages with the usual calomel and turpentine treatment, he was wont to advise us somewhat as follows: "You have now no doubt discovered that you have on hand a genuine case of typhoid, and if you are honest you will admit that it is beyond your power to cut it short a single day.

Medication as such does no good for the next two weeks. But if you betray this fact to the patient's friends, they will merely give you credit for ignorance and employ a more enterprising physician." He then recommended us to arrange two vials on the shelf, one containing spts. nit. dulc., the other containing spts. lav. comp. Then to give very explicit directions to administer ten drops of the one every four hours, alternating with six drops of the other, changing the size of the doses from day to day according to the condition of the patient. After the time for this expectant treatment had passed, he would describe the treatment for the remaining period of the disease, which was mainly of a supporting nature.

Could modern "mental expectancy" be carried any further than this? Probably Prof. Denton never heard the expression, but to those who believe with Dr. Musser that the employment of drugs, merely because you have been called to attend professionally upon a patient is harmful, Prof. Denton's advice may serve as a placebo to a tender conscience and at the same time to allow the physician to collect an honest bill.

THE ANTITOXIN PATENT TROUBLE.

Notwithstanding the grasping expectations of Behring, financially speaking, we are apprehensive that he will be greatly disappointed in his expected income from this country from the sale of his production.

It is a very encouraging consideration that we have such determined men, with us, as Messrs. Parke, Davis & Co., who will stand up and defend the interests, both of the prefession and the afflicted, in their endeavor to defeat the monopoly aiming to be enforced upon us; especially by a foreigner, when his claims to priority are doubtful.

The above named firm proposes to continue the manufacture of the antitoxine of diphtheria, and binds itself to defend all physicians who may use it, against prosecution.

And as their manufacture stands as well, if not better in the estimation of the profession, than the foreign article, it is to be hoped that its use will be continued.

PYOKTANIN, OR C. P. METHYLENE IN DISEASES OF THE EYE.

Medical men of to-day are almost overwhelmed with the constantly increasing number of new remedies, and new preparations, some of them good, but by far the greater number are absolutely worthless, and are thrown aside after the first trial, and, as a result,many of the more conservative members of the profession refuse to consider, or try, any new preparation or remedy, preferring to have others do the experimenting,consequently it usually takes a long time for a really valuable remedy to establish itself with the profession.

This would not be the case if the profession, before recommending, or reporting a remedy, would be more careful about investigating it, see in exactly what conditions it is applicable, and where it is not, and only recommend it in the condition in which it has proven to be useful.

Such a study seems to have been made of "Pyoktanin," or C. P. Methylene blue, by Dr. J. D. Riker, of Pontiac, Mich.

He states that he first used Pyoktanin on a case of serpigenous ulceration of the cornea, accompanied with such severe pain, that all the ordinary remedies failed to give

the least relief, and thinking of the physiological action of Methylene blue, how it had a decided affinity for nerve tissue, staining, and after a short time anesthetizing exposed nerves, it seemed to him particularly adapted to a case in which the nerves of the cornea were exposed, and were evidently causing the pain.

He accordingly applied a 2% solution of Pyoktanin at 8 a.m., the patient getting the first night's sleep in several days and making, from that time on, a complete and rapid recovery.

After trying Pyoktanin in nearly all the inflammatory and painful diseases of the eye, he has come to the conclusion that Pyoktanin is limited in usefulness, in diseases of the eye, to cases of ulceration, accompanied with pain, due to irritation of the nerve involved in the ulceration, and in such cases it is truly a great remedy and worthy much more consideration than it is at present receiving.

OLD AGE.

It seems that Great Britain is prolific in the maintainauce of longevity. Thirty-eight centenarians were reported last year; fifteen men and twenty-three women.

Mrs. Henry, of Gortree, who died at the age of 112, was the oldest. She left a daughter aged 90.

The St. James Gazette has reported 378 centenarians within the last ten years, of whom 235 were women. It would seem from the Gazette's statistics that women in that country have decidedly the advantage over men, as to long life. We can only account for this difference on the ground of the intemperate habits of the male sex.

BOOK REVIEWS.

Annual and Analytical Cyclopædia of Practical Medicine. By Charles E. de M. Sajous, M. D., and 100 associate editors, assisted by corresponding editors, collaborators and correspondents. Illustrated with chromo-lithographs, engravings and maps; Volume I. Philadelphia, New York, Chicago: The F. A Davis Company. 1898.

The issue of the Annual in this new form will be welcomed by the medical profession as an improvement over that which has prevailed during the last ten years. To say that this is a great improvement of the original Sajous' Annual is giving it faint praise in one sense; but in another it speaks loudly in its favor, because the latter was really one of the most useful compilations of medical literature that had ever been printed.

This first volume embraces subjects from abdominal injuries to and including Brights disease.

The first article is on Injuries of the Abdomen. Forty-six pages are devoted to this subject, including one hundred and fifty excerpts. The next subject taken up is Abortion in its different forms, with descriptions, etiology, symptomatology prognosis, diagnosis and treatment. The excerpts under these subjects will give an idea as to the exhaustive nature of the references. The abstracts interpolated in the text are controversially arranged, and aimed to sustain the views advanced by authors, or indicate fields as yet insufficiently explored.

The next subject of importance herein treated is that of Abscess, giving the different varieties, pathology, diagnosis, treatment, &c.

The work, when completed, will present all the general diseases described in textbooks on practical subjects—medicine, surgery, theraputics, obstetrics, &c., and inserted in their logical order in the text, all the progressive features of value presented during the last decade. This will remove the cause of dissatisfaction caused by the absence of general subjects in the older work. If the year brings forth nothing new upon any particular disease, the latter will, at least, appear as it was when last studied, whether this be, one, two, five or twenty years before. The general arrangement adopted will make it possible to cover the entire field in six volumes. As may be seen in any medical directory, the subjects treated in the first volume will represent exactly one-sixth of the whole. As to the therapeutics or remedies, only those that are being generally utilized in a manner compatible with scientific precision and in accordance with professional ethics have been incorporated. The list includes a few new agents which seem to merit further trial. To facilitate the use of the work, the subjects have been arranged in alphabetical order, the references being given in full at the end of each abstract.

The book contains numerous illustrations, is printed in double-columed pages with new clear-faced type, and is handsomely bound.

Annual and Analytical Cyclopædia of Practical Medicine. By Charles E. de M. Sajous, M. D., and one hundred Associate Editors, assisted by Corresponding Editors, Collaborators, and Correspondents. Volume 2. Illustrated with chromo-lithographs, engravings and maps. Published by F. A. Davis & Co., Philadelphia. 1899.

This second volume of this valuable "An-

nual and Cyclopedia" compares most favorably to the high standard of excellence attained by the first. In the method of preparing the articles there has been a change made; instead of being prepared under the immediate supervision of the editor, and submitted to members of the associate staff for revision and correction, as in the first volume, all the articles in the second volume have been prepared by their respective editors themselves. The articles are alphabetically arranged, beginning with Bromide of Ethyol. Following the bromides cerebral hemorrhage and chloral are taken up, and there is an extensive article on chloroform. This latter article is even worth the price of the book, as it describes not only the history of chloroform and its discoverers, but also its administration, the various mixtures, as well as the accidents and emergency treatments.

Articles which may be mentioned as especially complete and valuable are those on "Cerebral Hemorrhage," by Dr. William Browning, of Brooklyn; "Cirrhosis of the Liver," by Prof. Adams, of Montreal; "Cholera," by Prof. Rubino, of Naples; "Cholilithiasis." by Prof. Graham, of Toronto; "Diabetes," by Prof. Lepine, of Lyons, etc. The better known affections have also been edited by writers of special ability. Among the articles of this kind is that on "Diphtheria," by Drs. Northrop and Bovaird, of New York, who contribute a masterly review of our present knowledge of this affection from every standpoint. The papers by Prof. Eskridge, of Denver, on "Catalepsy;" Prof. Bondurant, of Mobile, on "Chorea;" Dr. Norman Kerr, of London, on "Cocainomania;" Dr. Oliver, of Philadelphia, on "Cataract;" Prof. Nathan S. Davis, of Chicago, on "Constipation;" Dr. Vickey, of Boston, on "Dilitation of the Heart," are among others, particularly entitled to the reader's special attention.

The principle of wise and judicious selections have been applied to the illustrations throughout the volume, and the publishers' work has been successful in making the book handsome as well as useful.

The Ready Refference Handbook of Diseases of the Skin. By Geo. Thos. Jackson, M. D., (col.) Prof. of Dermatology in the Womans Medical College of the New York Infirmary and in the Medical Department of the University of Vermont; Chief of Clinic and Instructor in Dermatology, College of Physicians and Surgeons, New York, &c., &c. With Seventy-five illustrations, Third Edition, Revised and Enlarged. Lea Brothers & Co., 1899.

The following pages represent the art of dermatology as it now exists. This is the third edition of the work in a reasonably short time. The early exhaustion of the second edition of this work is a gratifying indication of the favor with which it is regarded by students and practitioners. All dermatological advances made in the interval are fully presented in the new edition by revision and by the addition of new matter and illustrations.

The work is considered in two divisions. Part I is devoted to General Considerations, the Anatomy and Physiology of the Skin, the Diagnosis and Leisons of the Skin, Theraputic Notes and some "Dermatological Don'ts."

Part II gives a clean, clear description of the Diseases of the Skin and their Treatment, beginning with Abscess and ending with Zoster. This work represents all dermatological advances made in the interval between the third and first edition, and entirely new sections will be found on Bulpiss, Bunion, Dermatitis from Rœntgen Rays, Blastomycetic dermatitis, Ecphyma Globulers, Lupus Pernio, Pityriasis alba atrophicans, and Idiopathic multuple pigmented sarcoma. The work contains a fine appendix.

The alphabetical arrangement of the book having proved so acceptable, has not been changed, and practitioners, students and specialists will find it as heretofore a most concise and readily available source of knowledge on all dermal affections, their etiology, symptoms, diagnosis, treatment, prognosis, etc.

The work is well bound and neatly printed.

Progressive Medicine.—A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M, D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, handsomely bound in cloth, 490 pages. 28 illustrations and 3 colored plates. Lea Brothers & Co., Philadelphia and New York.

"Progressive Medicine" will be published in 4 volumes, and will cover the entire round of practical medicine in the broadest sense, and their appearance at intervals of three months, instead of annually, will insure the more rapid diffusion of knowledge, which is a requirement of our times. The first volume, now before us, is a substantial octavo of nearly 500 pages, illustrated with engravings and colored plates, and, as the yearly price for the set of four volumes is $10, it is evident that an exceedingly large demand is anticipated. This volume is a well-told tale of medical progress in all its

lines of thought, told in each line by one well qualified to cull only that matter which is worthy of his attention and necessary to his success. This work treats of surgery of the Head, Neck, and Chest, by J. Chalmers D. A. Costa, M.D. · Diseases of Children, by Alexander D. Blockader, M. D.; Pathology, by Ludwig Hektoen, M. D.; Infectious Diseases, including Crupous Pneumonia, by William Sidney Thayer, M. D.; Laryngology and Rhinology, by A. Logan Turner, M.D.; Otology, by Robert L. Randolph, M.D. The work closes with a good index. These men are all men of prominence and experience and their articles contain all that the master of a specialty knows of the year's work, and possess great intrinsic value. It gives us great pleasure to commend the work to the profession.

A Text-Book on Practical Obstetrics. By Egbert H. Grandin, M. D., Gynæcologist to the Columbus Hospital; Consulting Gynæcologist to the French Hospital; late Consulting Obstetrician and Obstetric Surgeon of the New York Maternity Hospital; Fellow of the American Gynæcological Society, etc. With the Collaboration of George W. James, M. D., Gynæcologist to the Cancer Hospital; Instructor in Gynæcology in the Medical Department of the Columbia University; late Obstetric Surgeon of the New York Maternity Hospital; Fellow of the American Gynæcological Society, etc. Second Edition. Revised and Enlarged. Illustrated with Sixty-four Full-page Photographic Plates and Eighty-six Illustrations in the Text, 6½x9½ inches. Pages xiv-461. Extra Cloth, $4.00 net; Sheep, $4.75. The F. A. Davis Co., Publishers, 1914-16 Cherry St., Philadelphia.

This is the most practical and useful book that we have reviewed in some time. It is a splendid guide to practice. It is clinical in its teaching. It is direct in its statement wherever facts warrant such directness. The book is divided into four divisions: Pregnancy, Labor, the Puerperal State and Obstetric Surgery.

Under Pregnancy is considered the Diagnosis, Duration and Hygine of Pregnancy, Pathology of Pregnancy and the Diagnosis of the Presentation and of the Position of the Fœtus. Under Labor is considered the Mechanism of Labor, the Clinical Course of Labor, the Management of Labor, and the Care of the New Born Infant.

Under the Puerperal State is considered, the Normal Puerperium, the Pathological Puerperium. Under Obstetric Surgery, all the important Obstetrical Operations are clearly and accurately given.

The illustrations are the finest and best we have yet seen, and will serve a most useful purpose. The entire work is filled with practical every-day needed information. There is nothing formal or stiff about the work. It is printed in large clear type and neatly bound. We commend the work to the student in the acquisition of knowledge and to the practitioner as a reliable guide.

The Pathology and Treatment of Sexual Impotence. By Victor G. Vecki, M. D. Philadelphia: W. B. Saunders, 925 Walnut Street. 1899. Price, $2.00 net.

This is a very interesting and important work. It is important from the fact that our literature upon this subject is very limited. In this treatise the writer speaks very openly and frankly.

Chapter I. is devoted to an interesting introductory showing the great importance of a thorough knowledge of this subject. Chapter II. gives a short discussion on the anatomy of the male organs of reproduction. Chapter III. is devoted to the physiology of the sexual act. Chapters IV., V., VI., VII. and VIII. to the Etiology, Forms of Impotence, Diagnosis and Prognosis. The remaining portion of the work is devoted to the all important subject of treatment of impotence. The work closes with a good index. We are glad this book has been written. If properly read and applied the good that will come out of it can hardly be estimated. The work has been carefully printed and well bound.

Nervous and Mental Diseases. By Archibald Church, M. D., Professor of Clinical Neurology and Mental Diseases and Medical Jurisprudence in the Northwestern University Medical School (The Chicago Medical College), Chicago, &c., &c., and Frederick Peterson, M. D., Clinical Professor of Mental Diseases in the Woman's Medical College, New York, &c., &c.; with 305 Illustrations. Philadelphia: W. B. Saunders, 925 Walnut Street. 1899.

This is a most excellent work for medical students and general practitioners. It is a most carefully prepared text-book. The literature of neurology and psychiatry has been sifted by the authors, and such digest revised in the light of their own experience in practice and in teaching. The work has been divided into two great divisions—Nervous Diseases and Mental Diseases. Under Nervous Diseases are considered the following sections with their sub-divisions:

Part I. Examination of Patients.

Part II. Diseases of the Cerebral Meninges and Cranial Nerves.

Part III. Diseases of the Brain Proper.

Part IV. Diseases of the Spinal Meninges and Spinal Nerves.

Part V. Diseases of the Cord Proper.

Part VI. Diseases of the General Nervous System, with known Anatomical Basis.

Part VII. Diseases of the Nervous System, without known Anatomical Basis.

Part VIII. Symptomatic Disorders.

Under the subject of Mental Diseases are given a general description of Insanity in its varied forms. The writers have presented their facts clearly, directly, and with brevity, despite the difficulty of condensing two great subjects within the limits of a single volume. The work is handsomely bound, beautifully illustrated, and well printed. The authors and publishers are both to be congratulated on the handsome appearance of their work.

Nursing: Its Principles and Practice, for Hospital and Private use. By Isabel Adams Hampton, Graduate of the New York Training School attached to Bellevue Hospital; Late Superintendent of Nurses and Principal of the Training School for Nurses, Johns Hopkins Hospital, Baltimore, Md., &c., &c. Revised and Enlarged. Illustrated. Philadelphia: W. B. Saunders, 925 Walnut St., 1898.

This is a very practical and useful book. To those who contemplate becoming a professional nurse we cannot too highly recommend this book. In the beginning is given a general outline of the work. The work then goes into detail as to the general requirements and duties of the nurse. The chapters on Hemorrhage, Anæsthesia, the care after Labor are specially fine and deserve special mention. The work is very complete. The illustrations and cuts are superb. The work contains 512 pages very neatly and substantially prepared from a mechanical standpoint. We commend the work in the highest possible terms.

Diseases of the Ear, Nose and Throat and their Accessory Cavities. By Seth Scott Bishop, M. D., D. C. L., LL. D. Professor of Diseases of the Nose, Throat, and Ear in the Illinois Medical College; Professor in the Chicago Post-Graduate Medical School and Hospital; Surgeon to the Post-Graduate Hospital, one of the Editors of the Laryngoscope, etc. Second Edition. Thoroughly Revised and Enlarged. Illustrated with Ninety-four Chromo-Lithographs and Two Hundred and Fifteen Half-tone and Photo-engravings. 6½x9½ inches. Pages xix-554. Extra Cloth, $4.00 net; Sheep or Half-Russia, $5.00 net. The F. A. Davis Co., Publishers, 1914-16 Cherry St., Philadelphia.

The author states in his preface that this work was designed, first, to help the students in preparing for their degree; second, for those progressive practitioners who wish to acquire the proficiency necessary to properly treat those patients who are unable to visit specialists; and, third, for those who are gradually exchanging their general practice for special work in these features. The latest developments concerning diphtheria, the blood-serum therapy, the medical and surgical management of mastoid diseases, the related diseases of the eye and nose, the most successful treatment of hay fever, the improved compressed-air instruments, vaporizing apparatus, inhalents, etc., have been given especial prominence. The opinions and experiences of a large number of eminent authors have been given on the subjects of diphtheria, antitoxin therapy, and hay fever.

The work contains 554 pages, including a good appendix. It is well printed, prettily illustrated and well bound, making a very handsome volume.

Seventh Biennial Report of the North Carolina Board of Health. 1897-1898.

This volume is well arranged, well bound, and printed with care, showing the supervising work of an experienced secretary. It is a record that will bear the closest scrutiny and sustain the severest test of criticism. Its contents abound in interesting papers and admirable discussions. It contains 222 pages, and it is a contribution to the cause of preventive medicine. It is a credit to the health authorities of the State.

Transactions of the New Hampshire Medical Society at the One Hundred and Seventh Anniversary, held at Concord, May 26-27, 1898.

A society which can hold a hundred and seventh anniversary is too well known to call for an extensive review. These transactions come to us well bound, neatly printed on first-class white paper. There are no transactions published that contain better material than the one before us. The article entitled "The Doctor and Lawyer" is very fine and would do credit to the pages of any volume. There are others of equal merit.

Transactions of the Michigan State Medical Society for the Year 1898. Vol. XXII. Published by Society.

The publication of these transactions make a useful and nice volume.

Many papers are now before this Society and published in these transactions that are worthy of special mention, viz: Sleeplessness, its Cause and Treatment, by Elmore S. Pettyjohn, M. D.; Vitality and Therapeutics, by Wm. J. Herdman, M. D., and

many others. Dr. Ernest L. Shurley, of Detroit, is president, and Collins H. Johnston, of Grand Rapids, is secretary. The volume is neatly printed and bound.

LITERARY NOTES.

Lippincott's Magazine for April, 1899.—The complete novel in the April issue of Lippincott's is "The House of Pan," a romance of the eighteenth century, by Anna Robeson Brown. The reader's interest is sustained throughout by the thrilling adventures of a young French girl and the American hero, valiant and true.

"Confessions of a Butcher," by William S. Walsh, has entertaining reminiscences of the author's experience in a publishing house.

Frank A. Burr's article on "The Men who Impeached Andrew Johnson" is especially good reading at this time.

In "A Question of Precedence," by Henry Holcomb Bennett, we have a vivid war story.

Frederick H. Dewey tells us "How an Earthquake Looks and Feels;" while other interesting and instructive papers are "An Ignoble Nobleman," by Charles Morris, dealing with the Duke of Buckingham; "Legends of Lost Mines," by Mary E. Stickney, and "Over, Under, and Through Boston," an accurate and entertaining account of the new subway, by George J. Varney.

William Ward Crane writes of "Our Naturalized Names," which is both timely and helpful, and Charles C. Abbott has one of his attractive talks about nature, under the title of "Views Afoot."

Paul Lawrence Dunbar is represented by a pathetic little sketch entitled "The End of the Chapter," and Will N. Harben by a sympathetic story, "The Convicts Return."

The poetry of the number is contributed by Elizabeth C. Gardozo, Marion Marville Pope, Clinton Scollard, Julie M. Lipmann, Martha T. Tyler.

The February Forum.—The current number of The Forum completes the twenty-sixth volume; and it may with propriety be said that the magazine, with increasing years, shows no sign of decadence, but, on the contrary, preserves its virility unimpaired. In the February issue there are two articles of especial importance at the present time. One is by Commander R. B. Bradford on "Coaling-Stations for the Navy." This officer, as is well known, has seen much active service, and in bringing the necessity of coaling-stations before the public his effort has been, as he says, to deal with facts. The other paper is by Hon. David J. Hill, Assistant Secretary of State, and is entitled "The War and the Extension of Civilization." Mr. Hill approaches his subject from a new standpoint, and claims that the terms "imperialism" and "expansion" do not meet the case. A more fitting phrase, he considers, to designate the aims and achievements of the nation is "the extension of civilization;" for it expresses the motive and controlling principle of the war and of the treaty by which, when ratified, it is to be concluded. Hon. Charles Denby contributes to the same number some further arguments "Why the Treaty should be ratified."

In the American Monthly Review of Reviews for April the editor reviews the work of the Fifty-fifth Congress, examines the present status of the various plans for interoceanic ship transit, discusses the latest developments in the Philippine situation, and comments on the other news topics of the day in home and foreign politics, including the cabinet change in Spain and the altered relations of Germany, England, and the United States.

Scribner's Magazie for February brings forward several more of its attractive features for 1899. It is not a "War Number," although it contains one of the most graphic things yet written about the war—the second instalment of Governor Roosevelt's serial on "The Rough Riders."

The article on The Resurrection, which The Living Age for March 18 reprints from the Contemporary Review is a thoughtful and noble study of the evolution of religion, which is peculiarly appropriate to the closing days of Lent.

The Quarterly Review's striking paper on Women Poets is to be reproduced in The Living Age, the first half of it in the number for April 1.

MISCELLANEOUS.

Board of MedicalExaminers.

The Board of Medical Examiners of the State of North Carolina will meet in Asheville, N.C.,Thursday afternoon, May 25th, 1899; all applicants are urged to be present at this time to register and be ready for examination on the following morning.

Thos. E. Anderson, M. D.,
Sec. Board Med. Ex., Statesville,N.C

Pain in the Fallopian Tubes.

Dr. Ernest Hall (Canadian Practitioner, January, 1899). Chronic salpingitis is painful for two reasons: first, on account of the exudations causing adhesions with the neighboring organs; second, on account of distention of the tube, usually at the menstrual period. One fact appears to us to be beyond dispute, that small and lax adhesions no more than the existence of serous exudations are insufficient in themselves to cause pain. It seems that active inflammation and the presence of infection are needed to make this condition painful. The prolapse of the tube toward the cul-de-sac is always troublesome, and at least causes slight pain and uneasiness. We should notice the probability of making a wrong diagnosis in salpingitic pain. The patient might complain of pain in one side of the pelvis, when upon examination inflammatory exudation or a tumor may be discovered upon the other side. We have seen a displaced tube lying across the posterior face of the uterus in such a position that its pavilion, extended by exudation, formed a tumor which was fixed to the pelvis on the opposite side. The pain in this case was located in the fine nerves which are distributed upon the tube through the corresponding ligament. The pain of salpingitis is generally fixed, and undergoes increase during menstruation, not previous to it, as in ovaritis. But after menstruation it undergoes marked decrease, and reappears two or three days later. This latter pain is caused by the traction of the adhesions which fix the tube to the pelvis.

The Indications for Operation in Renal Tuberculosis.

Park (University Medical Magazine, February, 1899,) says that when the kidney is affected with tuberculosis the sooner it is removed the better, provided there is no similar lesion in the other kidney, or elsewhere in the body.

It is only in rare instances that a diagnosis can be made so early that any treatment but the surgical can be depended upon, and it would be exceeding rare to find a kidney where the tuberculous lesion was so isolated that it could be eradicated without removing the whole organ. The first point to be considered is the general propriety of the operation. The second point is as to exact diagnosis, whether one or both kidneys are involved. If both are affected only harm, and no good, can come from the operation. The third point for consideration is as to whether the lungs or any other organ of the body are involved.

If the ovaries are involved, they may be removed at the same time with the kidney, but if other organs are involved, the operation is contraindicated. If the peritoneum is involved, it may perhaps be proper to remove the kidney by the abdominal route, for the purpose of exposing the peritoneal cavity to the air.

The danger of the operation itself is in proportion to the gravity of the condition requiring operation, and should be so represented to the patient.

The simple removal of the kidney in an ordinary case is not a long or difficult operation. But when it becomes necessary to remove a diseased ureter, the operation is greatly extended, and requires extensive dissection, so that the operation is often protracted to the point of endangering life.

What is necessary to be done should be left to the judgment of the operator at the time of operation, and no fixed plan be agreed upon in advance.

Partial nephrectomy is contraindicated in theory, although apparently successful sometimes in practice.

The experience of a number of competent observers seems to show that after the early removal of a tuberculous kidney the progress of the disease in the remainder of the genito-urinary track is at least delayed, and in some cases entirely arrested.

The writer prefers the extraperitoneal operation of Konig in almost all cases when there is not some special indication for the selection of the abdominal route. In some instances it may be advisable to perform the operation at two sittings.

Traumatisms of the Urethra.

G. Frank Lydson (Railway Surgeon for December, 1898,) says that all of the severe varieties of urethral trauma are likely to be followed by serious results. In general the results of urethral trauma are as follows: (1) Hemorrhage; (2) retention of urine; (3) urethritis: (4) cellulitis and gangrene; (5) extravasation of urine, causing (a) cellulitis, (b) gangrene, (c) peritonitis; (6) septicemia; (7) such remote results as (a) fistula, (b) stricture, (c) false passages from attempts to introduce instruments through the lacerated canal.

Hemorrhage is rarely fatal because of the lacerated quality of the wound, and because the same ecchymotic swelling that shuts off the urinary way also prevents escape of blood *per urethram* and via the vesical neck into the bladder.

Retention of urine is always a serious matter, but can always be relieved by surgical measures.

The danger of extravasation and simple contact of the urine with the injured surfaces largely depends upon the condition of the urine and the length of exposure of the tissues to its influence. Normal urine, with free escape, is in no wise injurious to the tissues. If septic, either primarily or from being pent up in the tissues for a time, it is exceedingly dangerous, not only locally, but generally.

Urethritis from urethral trauma is simple, easily cured, and demands no attention here.

Urinary antisepsis, local and per os, is indicated during the course of urethral injuries. Boric acid irrigations, with salol and oil of eucalyptus internally, accomplish the desired result better than anything known to the author. Severe hemorrhage demands perineal section, perineal and urethral packing, and drainage.

Systematic Exercise in the Treatment of Locomotor Ataxia.

P. H. Zenner (Cincinnati Lancet Clinic).

1. All cases should be benefited by the exercise treatment, many to the degree of apparent recovery, unless there be special contraindications to the treatment. Failures under these circumstances usually mean faulty method, or that the treatment has not been persevered in sufficiently long.

2. Contraindications are loss of vision, mental impairment, bone and joint disease, spasticity, and muscular atrophy, the presence of strong irritation-symptoms, rapid progress of the disease, a state of great exhaustibility, and serious organic disease.

3. In cases of anemia, poor nutrition, and lax joints, these general and local conditions should be remedied before the treatment is instituted.

4. The conditions most favorable for the treatment are a stationary, or almost stationary, state of the disease, good general health, intelligence, hopefulness, and perseverance.

5. Light cases are more amenable to a practical cure, but bad, even bed-ridden, cases often give brilliant results.

6. The necessary duration of treatment varies from a month or more for the lightest, to six months or a year for bad cases; but the exercises must be kept up in order to insure the continuance of the improvement.

7. Success of treatment depends upon thorough knowledge of the method. This is especially true in bad cases.

8. Exercises should be chosen that are most suitable to remedy the existing ataxia, and every effort should be made to do them with the greatest precision.

9. The sense of fatigue is often blunted in ataxies, while over-fatigue injures them. The patient should, therefore, be guarded against too taxing or too prolonged exercises, or other unnecessary efforts.

10. To obtain most benefit from the treatment the constant supervision of the physician, at least in its early periods, is absolutely necessary.

Vaccination.

The Public Health Reports issued each week by the United States Marine Hospital Service, have for several months shown the increasing prevalence of small-pox in this country. From January 1, 1898, to November 25, 1898, 2,553 cases of this disease were reported to the Supervising Surgeon-General. And this does not include all. For there are many points which simply report "small-pox present" or "prevalent" and do not indicate the number ot cases.

By far the greatest portion of cases, according to the Annals of Gynecology, are in the States of Alabama, Georgia, Arkansas and Mississippi. But there is a sufficient sprinkling of them everywhere to have made it seem wise to the department to issue a special bulletin styled a "Précis upon the diagnosis and treatment of small-pox"—Vol. XIV.,No. 1. It is interesting and instructive, but we wish to call the attention of our readers only to that part which treats of vaccination. For we are hearing altogether too much in these days of the uselessness and dangers of this procedure. A noble literary attempt to combat this fallacy is H. Rider Haggard's "Dr. Therne." If you are living in a nest of "Antis," get a copy and circulate it among your friends.

But to establish the truth of vaccination, the prédis quotes from Dr. Bizzozozirs, of Rome, who in a recent lecture said: "Germany stands alone in fulfilling in a great measure the demands of hygiene, having in consequence of the calamitous small-pox epidemic of 1870-71 enacted the law of 1874, which makes vaccination obligatory in the first year of life, and revaccination obligatory at the tenth year. What was the result? With a population of 50,000,000, having in 1871 lost 143,000 lives by small-pox, she found by her law of 1874 the mortality diminished so rapidly that to-day the disease numbers only 116 victims in a year. These cases, moreover, occur almost exclusively in towns on her frontier. If it were true that a good vaccination does not protect from small-pox, we ought to find in small-pox epidemics, that the disease diffu-

ses itself in the well vaccinated no less than in the non-vaccinated countries. But it is not so. In 1870-71 during the Franco-German war, the two peoples interpenetrated each other, the German having its civil population vaccinated optionally, but its army completely vaccinated, while the French (population and army alike) were vaccinated perfunctorily. Both were attacked with small-pox. The French army numbered 23,000 deaths by it, while the German army had only 278 and in the same tent breathing the same air, the French wounded were heavily visited by the disease, while the German wounded, having been vaccinated, had not a single case."

Truly, that is powerful evidence if we need to quote beyond our own experience ?

Probably all of us have had examples of very sore arms, obstinate indolent ulcers, vaccinia rashes, etc., and may have been puzzled as to their cause. It may not therefore be amiss to present methods recommended by these United States government experts. If they are our own, well and good. If not, they may be suggestive.

Bovine virus is, of course, the only kind employed and it must come from an accredited source and only the glycerinized lymph should be used. Surely we, none of us, have intended to buy poor points, but now we are advised not to use points at all, but the little sterile tubes. Having then the suitable material, the part to be vaccinated —usually the left arm—is bared and the skin rendered antiseptic (probably they mean aseptic) by means of soap and water or alcohol. The needle or lancet is sterilized in alcohol or the flame and the part scarified in one or more places; the virus is then robbed in. The same needle is not used on more than one person. A lancet is sterilized each time used. (Why not a needle as well?) "If the vaccination has been successful it will be found that in the course of three or four days a small papule will appear, which soon after becomes vesicular, and is surrounded by a circumscribed areola; this gradually increases till the seventh or eighth day; in the meantime a crust forms which in due course falls off, leaving the characteristic scar resembling the pits of small-pox, the whole process occupying about three weeks."

Due care should be exercised to prevent the vaccination from being irritated or the "seal" from being broken and to prevent the wound from being infected. A vaccine shield is best for this purpose, and it is recommended that either one provided by the dealers or improvised be used, but if a vaccination shield is not used care should be taken, as above stated, to prevent the breaking of the "seal" and undue rubbing of the part by the clothing. Adhesive plaster should not be used for this purpose.

Now that does not cover all that one wishes to know, or will practice in this procedure, but it may contain some useful hints. Try them and see.

Skin Eruptions Caused by Antipyrin.

Wechnelmans (Edinburgh Med. Journal) gives a brief description of the varieties of skin eruptions met with in cases of antipyrin poisoning, and also relates the conditions which he had observed in 5 cases: (1) In a man aged 36, who had suffered from attacks of migraine for several years, and had been in the habit of taking antipyrin pretty freely without medical advice, a vesicular eruption suddenly occurred round the mouth and front part of the tongue; the penis, scrotum, and anus were similarly attacked. The eruption was extremely painful. When the antipyrin was discontinued the patient soon recovered. As an experiment a small dose was again administered, and in an hour and a half the eruption reappeared. (2) A woman, aged 40, had taken antipyrin for migraine. The lips, eyelids, tongue, and dorsal aspect of both hands were attacked with a painful vesicular eruption. On inquiry she admitted having taken antipyrin for her headaches. At a later date she took ½ gr. of antipyrin; this small dose was sufficient to cause an eruption identical in every respect to the former one. (3) A man, aged 62, suffering from diabetes, after taking antipyrin for a time, noticed a hæmorrhagic eruption on the dorsal surface of his left hand; the skin was œdematous. The drug was discontinued, and the eruption immediately began to subside; pigmentation was noticed for a considerable time after the eruption had disappeared. (4) A diabetic man, aged 65, for six years had suffered from a vesicular eruption, which occurred every second year. The parts attacked were the dorsal aspect of both hands, the lower lip, anus, and scrotum. After a short time the vesicles burst, leaving a scale which gradually died away. (5) A man, aged 29, had suffered from periodic attacks of "eczema," which one doctor had called syphilitic. In May, 1893, he took 3 gr. of antipyrin for headache, and in half an hour he began to feel a burning sensation in the perineal region, also between the fingers and on the dorsal aspect of the hands; later the toes became affected. Vesicles formed, and the whole progress of the case coincided with his former attacks of so-called eczema. The patient was advised never to take antipyrin; he had no further skin trouble.

Mechanism of the Contraction of the Peripheral Bloodvessels Under Hydrotherapeutic Treatment.

Onimus at the International Congress on Hydrology held at Liége in 1898, referred, says "Treatment," January 12, '99, to the classical doctrine that the circulatory phenomena resulting from hydrotherapeutic applications must be explained as due to vaso-motor nervous reflex action. He points out how the relative amount of muscle in the walls of the arteries increase with the distance from the heart. Owing to the contractile function of the arterioles, he thinks the term "cœur périphérique" is almost justified when applied to the peripheral circulatory mechanism. The unstriped muscular tissue of the vessel-walls is capable of two sorts of action: (*a*) spasmodic contraction, when the stimulus is sudden and intense; (*b*) peristaltic contraction (like that of the intestine, but at more frequent intervals), when the stimulus is less sudden and more gentle. Through the microscope the contractile action of the bloodvessels may be watched in the interdigital web of a frog. Even in the human subject, when the central artery of the retina is obstructed by a clot, the arterioles which help to establish a collateral circulation may, by the aid of an ophthalmoscope, be observed to contract peristaltically. Nobody, says Dr. Onimus, who has once observed this phenomenon, will have any doubt about the power of spontaneous contraction possessed by bloodvessels. Onimus and the late C. Legros made a series of experiments on the subject, and found that, when the aorta was ligatured, or when the heart's action was arrested, so long as the arteries maintained their contractility, innocuous liquids (such as milk), when introduced into the arteries, requrned by the veins. Onimus acknowledges that the sudden contraction of the vessels which immediately follows the application of cold water to the skin is really a nervous reflex; but he thinks that the subsequent vascular dilatation and tonic effects are produced in the vessels themselves independently of the nervous system—in fact, that the vascular dilatation is not a neuro-paralytic phenomenon, or due to vaso-dilator nerve-fibres. In the same way Onimus argues that the vascular dilatation following hot applications ("hydrotherapeutic reaction to heat") must not be regarded as a vaso-motor nervous phenomenon, but as a reaction originating in the vascular walls themselves. He points out that the action of hydrotherapeutics is not confined to the bloodvessels alone, but that the activity of the urinary bladder, of the intestines, and of all organs more or less composed of unstriped muscular fibres, can be promoted by the use of douches.

Clinical Study of Nervous Dyspepsia.

Dr. Ludwig Herzog has made the following statement, says the Medical Record:

The pathologic, anatomical examination in these cases should, in so far as possible, be directed to the mesentery and splanchnic nerves as well as to the stomach.

In nervous dyspepsia there exist an increased irritability in the course of the vagus (and the sympathetic) and an action upon the entire nervous system.

The term nervous dyspepsia is up to the present day the most correct and best that can be applied. Neurasthenia is but one of the many etiological factors.

Nervous dyspepsia is not a symptom, but a uniform and indeed characteristic clinical picture.

Nervous dyspepsia is a chronic affection.

Nervous dyspepsia is not only a pure sensory, but mostly a mixed, neurosis, and indeed oftimes in connection with a sensory neurosis there exists a neurosis of motility and secretion.

Body weight and the amount of acidity often increase or decrease in inverse proportion.

Nervous dyspepsia with motor insufficiency of the stomach and simultaneous hyperacidity is an especially important form; this leads in part to motor insufficiency with subnormal or normal acidity.

Nervous dyspepsia with good motor power may be associated with hyperacidity and subacidity.

Nervous dyspepsia as a pure sensory neurosis is not so common. A thorough examination of the chemical and motor functions of the stomach will tend to narrow this group very materially.

Nervous dyspepsia may be the results of a gastroptosis (enteroptosis), but not the cause of it. The maladie de Clenard does not at all belong to the category of nervous dyspepsia, nor is it a variety of this affection.

An aggravation of the dyspepsia shows itself in a strong reaction of the nervous system. The subjective symptoms often remain in severe form for a considerable length of time. A simultaneous oscillation of the subjective symptoms and the functions of the stomach is not frequent. On the other hand, according to my observations, a change—that is, an increase of the dyspepsia—often takes place at certain fixed periods of the day, namely, when the maximum daily physical and mental resistance has been reached or exceeded.

In nervous dyspepsia even the empty stomach may be the seat of disturbances, which are for the most part irritations in the sensory sphere.

In a very large number of cases we are in a position to definitely diagnose nervous dyspepsia.

In the differential diagnosis chronic gastritis and ulcer of the stomach are mainly to be considered.

Appendicitis or Epityphlitis?

Kuster (Edenburgh Medical Journal) protests against the use of the term "appendicitis, which he regards as most unsatisfactory both in meaning and in form. German anatomists do not use the term "appendix" in describing the vermiform process of the cæcum, and are unwilling to adopt a term which in its multiple sense is already generally applied to the small fatty processes met with on the large intestine. The form of the term "appendicitis" is held to be particularly objectionable, as it consists of a Latin word with a Greek ending. Such a term, Kuster holds, would be hardly tolerable even if it could not be replaced by another. It is not difficult, however, he states, to find a good substitute. The Greek anatomists, whose definitions were made chiefly on animals which with some few exceptions do not possess a vermiform process, left no term for this structure, but it would have been in accordance with the spirit of the Greek language to have given to it the name of "epityphlon" as indicating a something attached to the outer surface of the cæcum. On these grounds Kuster would advocate the substitution of the term "epityphlitis" for that of appendicitis. The former term, which he has long used in his clinical lectures, will, he anticipates, be preferred by those acquainted with Greek to the older and more frequently used term.

Diphtheria.

D. C. Bowen, M. D., (Louisville Journal of Medicine and Surgery).

The period of incubation may last but few hours to days and even a month. The symptoms are both local and constitutional. The symptom of localized inflammation has nothing to do oftentimes with the intensity of the disease. The pulse may be normal throughout or accelerated. The fever irregular. Visual examination of the throat reveals one or two gray or yellowish spots on tonsils or in vault of pharynx. They may remain for a few days as isolated spots, or they may coalesce and deepen and become more adherent, and a continuous membrane is formed. The chain of lymphatic glands may become swollen, and I believe it is Page who said, when the gland at angle of jaw becomes involved and is indurated and swollen, we may look for post-nasal invasion, which should always cause us to treat that surface as well as the throat. The fetid breath is a symptom I always look for in all suspected cases of diphtheria.

When the nares are involved, we generally have a thin muco-purulent discharge from the nose. The pain may be very slight or intense, radiating toward the ear on the side corresponding to infected part of throat; I have noticed this symptom more often in the unilateral cases (where only one side of throat was affected).

The duration in the cases I have had was about ten days. The treatment I will give as I used it in the cases I am about to report. I tried to isolate all my infected cases by placing them in a room with sun exposure and ventilation, and cleanliness was insisted upon. All clothes used about the bed were burned. I gave the well children a round of calomel, quinine, and tincture chloride of iron, and had them use powdered sulphur. All the well children were examined every day, and on the slightest redness of throat the child was removed to other quarters and treated. I generally gave as a routine broken doses of mild chloride of mercury and subnitrate of bismuth for a few days, then substituted the following prescription:

R Bichloride of mercury..... gr. ¼
Tr. chloride of iron..... ℥i.
Glycerine, U. S. P..... ℥i.
Aquæ dest. q. s. ad..... ℥iv.
Sig: Use with mop once a day, and give a teaspoonful every four hours.

I also have patients to inhale about ten grains of sublimed mercury three times in twenty-four hours. I also have a spray used three or four times a day of per oxide of hydrogen and lime water, equal parts. I treat complications as they arise. I have used the antitoxine in some half a dozen cases with satisfaction to myself. In two of these cases it was used as a last resort. I injected two thousand units in each case subcutaneously in the thigh; after the reactive stage they went on to an uninterrupted recovery.

Somatose in Syphilis.

Fournier (Edenburgh Medical Journal) advocates the administration of somatose in cases of secondary syphilis, particularly those in which marked wasting occurs, or profound blood changes. The "syphilis dénutritive secondaire" described by Lavallée (which is characterised by loss of appe-

tite, wasting, loss of body weight, and a feeling of great depression and weakness) seems to be treated by somatose. Cases only in which the blood shows a decreased percentage of hæmoglobin, associated with vertigo, insomnia, and gastralgia are suitable. These symptoms sometimes resist every kind of treatment. The author showed a case at the Berlin Dermatological Society in which somatose had practically cured the patient after all other remedies had failed. The man was 40 years of age, and suffered from ulceration of the skin in the inguinal region, œdema of the feet, epistaxis, and a purpuric eruption which started in the pharynx, and rapidly spread to the gums and buccal mucous membrane. The case was complicated by mercurial stomatitis and swelling of the tongue. Respiration and deglutition became difficult. Milk caused indigestion, and had to be discontinued. For twenty days the patient was fed on soup and 4 teaspoonfuls of somatose per diem. With this diet the patient gained in strength. He continued to take somatose for several weeks. The syphilitic symptoms abated when the patient began to assimilate more food. The addition of somatose to cow's milk facilitates the digestion of the milk in many other syphilitic conditions. Somatose is best given in small doses of 12 grams. The author has also found somatose to be of use in chlorosis and the anæmia caused by malaria. Its chief use, however, is in cases of mercurial stomatitis, and in conditions producing a diminution in the amount of hæmoglobin.

The Heating of Milk Used for Feeding Infants.

Dr. L. M. Yale (Canada Lancet, 1898. No. 6).

Whether the mixture shall be sterilized is a vexed question. On the one hand are presented bacteriological studies and some clinical experiences to show that milk cannot be made safely sterile for infant feeding below 90 deg. C. (184 deg. F.), and that 100 deg. C. (212 deg. F.) is better; that with pasteurization, 75 deg. C. (167 deg. F.), or lower, accidents frequently happen to the milk, and infrequently gastro-enteric disturbances, more or less acute, occur, due to milk poisoning. On the other hand, there is a growing distrust of sterilization and even of pasteurization, as a possible cause of malnutrition, especially of scurvy.

There is no doubt that both sides present facts, but it seems to the author that much depends upon the point of view. The necessity of thorough sterilization at high temperature seems to be most held by those having large outdoor clinics, where the difficulty of enforcing details is greatest. Those having affairs more in hand see the other side more clearly. There is no doubt that the one party can show cases of peculiar susceptibility where uncooked milk prepared in the best laboratories cannot be digested. The other party produces cases of scurvy in which the cessation of symptoms followed the cessation of the sterilization.

Whatever increases the chance of bacterial contamination or multiplication, whether poor milk-supply, want of reliability of those in charge of the food, heat, unsanitary surroundings, or what not, is an argument in favor of sterilization, and the thoroughness of the sterilization is to be in proportion to the probabilities of contamination. Practically, in cities, the ordinary milk-supply must all be sterilized, at least in warm weather.

Acute Cervical Adenitis in Childhood.

Dr. G. W. Moran (The Physician and Surgeon, 1898. Vol. xx., No. 8).

This is an acute local disease resulting almost invariably from secondary infection. The most frequent causes are traceable to catarrh of the nose and throat, adenoids, decayed teeth, unhealthy tonsils, stomatitis, and middle-ear disease.

The glands most commonly involved are those belonging to the submaxillary, upper deep cervical, parotid, superficial cervical, sublingual, retropharyngeal, and postcervical sets. Usually one, and rarely more than two glands undergo acute inflammation at the same time. The gland rapidly enlarges, and is attended with more or less pain, depending upon its location, and the amount of periglandular cellulitis.

The prognosis is always favorable, unless in some severe cases of acute adenitis of the retropharyngeal glands ending in suppuration.

The treatment of acute cervical adenitis divides itself into: (1) Prophylactic—Care should be taken to keep a clean membrane in all catarrhal diseases of the nose and throat. Unhealthy conditions of the vault should be corrected, unusually large tonsils should be removed, and *last*, but far from *least*, the teeth should be attended to. In some seventy-eight cases of acute adenitis, about sixty per cent. were directly traceable to bad teeth and suppurating gums, and twenty per cent. to enlarged tonsils and disease of the nose and throat; hence, the necessity for removal, or attempt at proper disinfection of decayed teeth and inflamed gums. (2) Medicinal—When the acute inflammatory stage develops, hot applications

should be made for the relief of pain. Cold is also recommended, but it is rare to find a child who will tolerate its constant application. To prevent the formation of pus, very little can be done. The early local application of the liniment or ointment of belladonna combined with opium also proves gracious in the relief of pain, and undoubtedly does, in many cases, check the process from going on to suppuration. When pus is present, some authorities advocate waiting until pointing takes place, which, it seems to me, is applicable only in very superficial glands, and is even then, bad practice. As a rule, pus is present in greater or lesser quantity for some time before it is possible to detect it, particularly when cellulitis extends for some distance around the inflamed node; and to wait after you are sure of its presence, thus allowing it time to burrow, is dangerous. After evacuation of pus, curretting may be necessary if healing does not progress rapidly. When suppuration does not take place, but the gland remains large and tender, the local application of potassium iodide ointment has acted better for me than other ointments, or the iodide internally.

Treatment of Exophthalmic Goitre.

Dr. Frank Oliphant (The Birmingham Medical Review) discusses this subject under the following heads: (1) The general hygenic treatment, which consists of rest in bed for a certain period of time, and the regulation of the diet, embracing non-stimulating and easily digestible foods; (2) of the drugs, belladonna in large doses does the most good, by restraining the action of the heart, and by decreasing (probably) the sécretory activity of the gland. Ung. hydr. iod. externally tends to decrease the size of the goitre; digitalis is effective as cardiac tonic. Phosphate of soda, so highly praised by some has been attended with no results in the author's hands; (3) electricity, so much relied upon formerly, has now given place to more effective means; (4) the author failed to obtain any results from the administration of either the thymus or the thyroid extract; the first one is probably somewhat more efficacious. Pancreatic emulsion, suprarenal gland and spleen have all been used with varying success; (5) operative treatment by Kocher consists in ligature of the thyroid arteries; other methods are: removal, by excision, of half or more of the gland, and exothyreopexy—the laying bare and bringing out of the gland, leaving it in this position, the usual result being thrombosis of the veins and shriveling up of the gland. The most recent operation is that by Jaboulay, which consists in the division of the cervical sympathetic. The mortality in all the operative procedures being rather high—fully 12 per cent—the tendency is making itself felt to resort to operative interference only after medicinal means have been exhausted and proved futile.

Curettement in Puerperal Fever.

Henry Perry, M. D., (Annals of Gynecology). Admitting that puerperal fever is produced by an intra-uterine infection, we believe that the best means to prevent the extension of the germs of infection is to combat them at their starting point, either by a complete and oft repeated disinfection of the uterine and vaginal cavities by antiseptic irrigations or by scraping away the diseased mucosa.

Nevertheless, should we at once take up the curette at the least rise of temperature in a post-partum case? We do not believe so. In some cases a few intra-uterine irrigations will be quite sufficient, and it is only in those instances in which this means has remained without effect that we resort to curettement, which, in spite of the only slight danger when it is done according to all the rules of the most strict antisepsis, is none the less a disagreeable operation for the patient.

We shall point out farther on, apropos of the objections that have been made regarding curettement, what are the complications to be feared in curetting a puerperal uterus.

The following is the treatment carried out at the maternity of Lausanne when there is a threatening puerperal infection or when the infection has appeared. As soon as a rise in temperature has been found after labor an antiseptic intra-uterine irrigation (preferably a 1 in 1,000 or 2,000 sublimate solution) preceded by a thorough vaginal irrigation. The next morning (rise in temperature usually occurs in the evening) another irrigation is given and is repeated several times during the day. If on the next day the temperature has become frankly febrile, if the lochi are thick with a tendency to fetor, curettement is done. The following days we continue the intra-uterine irrigations, at first morning and evening, then only once a day. When the fever has completely disappeared, the temperature no longer showing any tendency to go up in the evening, simple vaginal irrigations are begun.

It is well to change the nature of the solution employed as frequently as possible, as the organism becomes used to antiseptics just as it does to any medicine, and still

more, a certain number of antiseptics can not be employed with impunity on account of their toxic effects.

As to danger from hemorrhage, experience has demonstrated that it is a pure illusion. On the contrary, curettement arrests uterine hemorrhage instead of producing it, and if the patient is a bleeder the operation may be completed by an intra-uterine gauze packing.

Can the uterus be curetted in cases where there is an acute inflammation of the adnexa (acute puerperal parametritis) with or without abscess formation? The opinion of specialists is very devided on this question. While some recommended abstaining in cases of abscess of the adnexa, beleiving that the curette only spreads the infectious germs, others, far from abstaining, advise curettement. Thus, Berlin of Nice, is very categorical on this point and says: "I have for my part often curetted patients whose adnexa were painful, and others who manifestly had foci of parametritis; what I can say is that in these cases where there is a pre-existing lesion of the adnexa, I have never seen curettement the cause of the slightest septic complication." Professor Rapin believes that where there is inflammation of the adnexa, curettement is not to be advised; it is only exceptionally that it is to be employed when, for example, there is a retention of the placenta, and using it with extreme prudence. He has employed and has seen it employed in several cases of inflammation of the adnexa, and if in the majority of these cases the operation had no bad results, it certainly did increase the intensity of some of the symptoms.

We have done it in two cases of puerperal parametritis, in one of which an abscess had already formed, without remarking any result, bad or good. In the first case, however, the temperature dropped quite a little after the operation, but went up a few days latter. Consequently we believe that this operation, without being dangerous, if performed with sufficient precaution, is useless as regards a cure, because if infection has started in the mucous of the uterus, it will have long ago passed the limits of the organ and have become localized in the adnexa. This question has for that matter been well studied recently by Marney, of Bordeaux.

From what has been said I may here draw the following conclusions:

1. Puerperal fever being a disease whose origin is an infected wound, should be treated by an antisepsis of the organ containing this wound—the uterus.

2. The treatment should consist in the first place of antiseptic irritations of the vagina and uterus, frequently repeated.

3. If in spite of this treatment fever persists, curettement is indicated.

4. When there are acute lesions of the adnexa (parametritis) it is better to abstain from curettement unless there are absolute indications for the operation.

The Liquor Trade in America.

It is rather remarkable that the consumption of wines has not increased of late years since America itself has become a wine-producing country. Perhaps the use of home—i. e, American-made—wines has interfered with the importation of foreign ones. Certainly the importation of wines has not increased during the last fifty years. The "Hospital" states that in 1840 it was 4,748,342 gallons, and in 1896 it was only 4,101,649 gallons. This, even, was an increase of a million gallons or so over the consumption of 1895; while it is to be noted that from 1860 to 1870 the average annual consumption of foreign wines was about nine million gallons. Thus, while the consumption of wines per head of the population has varied very little, it is obvious that the new consumers have largely used wines made in their own country. This is shown by the fact that while in 1840 the consumption of American wines was only 124,734 gallons, in 1896 it stood at 14,599,757 gallons. And this was by no means the largest figure that domestic wines had to show. In 1888 their consumption stood at the figure of 31,680,523 gallons, since which time it has been diminishing along with that of spirits. All this time the consumption of beer has risen steadily. This seems to imply that while absolute abstinence is less universal than it was half a century ago, temperance is much more common. Not so many people in proportion to a largely increased population eschew every form of intoxicating liquor, but far more avoid those which contain a considerable proportion of alcohol.

Teetotalism is less common; but so also is drunkenness. American literature of a comparatively recent date shows always the two extremes. There was the severe puritan type which looked upon the man who took a modest glass of beer with his dinner (to correct the superabundance of pie) as foredoomed to a drunkard's grave; and there was the literature which showed the miner celebrating the find of a pocket of gold, or the death (by revolver or otherwise) of a comrade, by endless drinking of the rawest whiskey. Both these types seem to be vanishing from literature, as from life. The temperance crusade does not grow weaker; but it takes a larger view. Drunkenness is held in greater abhorrence than

before; but there is no longer the same conviction that no one can drink the mildest of fermented liquors without falling into absolute drunkenness. In the increasing consumption of beer in the United States, combined, as it is, with a decrease in the consumption of all other liquors, we may read the fact that the Americans are beginning to appreciate the value of something that will stimulate digestion without tempting to bad habits, somethimg more harmless to the digestion than candy, and less harmful to the moral nature than the drugs which are apt to become a substitute for intoxicants.

Locomotor Ataxy in Its Modern Aspect.

There being no syphilitic exudation in true tabes, anti-syphilitic treatment is uncalled for. Diet, hygiene, rest, are the main factors in the successful management of the disease. Digestion, assimilation, elimination, must be promoted. Climate, medicines, and electrotherapy are of distinct value.

Distressing symptoms, the "lightning pains," "ataxia," &c., are to be alleviated without impairing the general nutrition. Opiates had better be avoided.

Rest in bed is a valuable measure when obtainable. The patient should sleep much and work little. When complete rest is not practicable, a few extra hours daily in the horizontal position is advisable.

The diet should be liberal—meats, fats, milk, water in abundance, and fruits, with a minimum allowance of starchy and saccharine foods. Alcohol is to be prohibited.

The patient should wear warm clothing, and, if possible, spend his winters in a warm climate. Measures addressed to the elimination of auto-toxines generally by the skin, kidneys, and bowels should be instituted.

Drugs of more or less use in the treatment are those of nutritional value, mainly phosphorus, iron, cod-liver oil, with tonics such as strychnine.

For the lightning pains aluminum chloride (dose, two to four grains in water) is a drug of considerable value. Dr. Gowers originated its use for this purpose.

Electricity is of a distinct value in a large proportion of cases. Ordinary faradism is useless, galvanism better. The writer's experience has led him to value highly the sinusoidal current. It is a current of "high potential" (voltage), rapid alteration (480 to 1920 per second), and comparatively small "quantity" (amperage). Its application is simple and controllable, as well as pleasant to the patient. It is administered by means of a "foot-plate" and a neck electrode for from five to fifteen minutes every alternate day for six weeks. Under its use, with simple hygiene and often without drugs, the lightning pains cease, the ataxia of gait and station disappears, and the well-being of the patient is promoted. These effects would seem to indicate an actual improvement in the nutrition of the peripheral sensory neuron, with capacity for better function in some, possible restoration of damaged nerve endings in others.

Microbian Origin of Eclampsia.

Bar, while not antagonizing the microbian hypothesis, holds that its truth is not yet demonstrated. The adherents of the view are influenced to their belief by the following parallelism between eclampsia and the known infectious diseases of microbian origin (Obstetrics, January, 1899):

1. Stage of prodromes; 2. more or less nephritis and albuminuria; 2. postmortem rise of temperature; 4. clinical evidences of infection—several authors have attempted to show that eclampsia occurs in groups, quasi-epidemic; others point out a grest similarity throughout between eclampsia and tetanus; 5. convulsions—some diseases of bacterial origin, e. g.: scarlatina, often begin with this phenomenon; 6. high mortality.

Bar admits that this course of argumentation is seductive, but that before it can be accepted as final much must be done in the direction of studying the urine, blood, and tissues of the mother, and the placenta and tissues of the fetus.

With regard to the urine in eclampsia, there is but one conclusion, viz,: that cultures may or may not be prepared from it. While the urine of healthy pregnant women has been reported as sterile, Bar has been able to cultivate germs from it in certain cases, precisely the same germs that can be cultured from the urine of eclamptics. It is certain that these urines are but feebly toxic when injected subcutaneously in massive doses into animals.

As for the maternal blood and viscera, cultures could be developed in some cases, in others not at all; nor is there any evidence to show that the staphylococcus which has often been cultivated is disease-producing under these circumstances. These conclusions are applicable only to antepartum convulsions or those which occur at the time of labor, for it is well known that in puerperal infection many kinds of germs are pathogenic, and that they may at times produce anomalies in connection with some form of general infection.

The results obtained from examination of the placenta and fetal viscera are not much more satisfactory. The author relates a case of eclampsia and jaundice which recovered. The child survived but a few days, and there was found on autopsy a peritonitis due to the bacillus coli. The case may have been one of prenatal infection of the child by the mother.

Entrance of Air into the Uterus during Labor.

Teuffel advises (Obstetrics, January, 1899) that the term physometra, which is generic and applicable to any kind of gas in the uterus, should be restricted to the spontaneous formation of gas within the uterus, while the word aerometra should be used to designate the presence of atmospheric air which has entered the uterine cavity.

From a case related by the author it would appear that the following combination of circumstances make it possible for air to enter the womb: First premature rupture of membranes and escape of amniotic fluid; second, movable infantile head, the cervix being in full dilatation; third sudden change of position on the part of the mother, involving the tilting of the uterus. Under these circumstances the air suddenly entered the uterus through the ruptured membranes, and caused an extensive balloon-like swelling. Labor was not much interfered with, and after the child was born, the air rushed from the womb with a considerable sound. The author concludes that there is no danger of air embolism in these cases, because air does not get between the membranes and uterus. He believes further that cases of this sort are not so infrequent in practice and are commonly overlooked. Finally he wonders whether aerometra could ever be a cause of post-mortem delivery which is occasionally observed. There is no doubt that physometra is able to cause this phenomenon.

Senile Changes in the Fallopian Tubes.

Schnaper (London Lancet) points out that while the senile changes in the uterus and ovaries have been fully investigated, little has been discovered regarding those in the Fallopian tubes. He has been able to find references to these changes only in the researches of Ballantyne and Williams and of Grusdew. He had examined the tubes from 20 women, varying in age from 47 to 90 years. In each case he investigated the structure of the uterine end, of the middle part, and of the abdominal extremity of the tube. He found in the mucous membrane changes very similar to those which occur in colpitis senilis: there was partial loss of the surface epethelium, more or less marked growth of connective tissue, and a bridging across or complete closure of the lumen of the organ. Unlike Ballantyne and Williams, Schnaper did not find an almost complete withering of the longitudinal musculature of the tube, but there was nearly complete disorganization of both the circular and longitudinal layers. An ingrowth of the connective tissue splits the musculature up into islands, and there is more or less marked thinning of the wall of the tube. Two neighbouring tubal folds which have lost their epithelial covering in part may become united by their apices, and so give rise to the appearance of glands. In the adventitia of the vessels, just as in the musculature, there is seen a process of growth of granulation tissue followed by shrinking. As a result of these senile changes, it is no longer possible to recognize a clear distinction between the three parts of the Fallopian tube.

The Treatment of Pneumonia in Children.

Chapin (Medical News, Nov. 19, 1898,) says that it is quite possible that a certain grade of fever may have a beneficial action when it accompanies the reaction of the tissues to infective and inflammatory irritation. It is also a clinical fact that children, as a rule, stand high temperature well. When this is the case it is folly to upset the stomach by drugs, or weaken the heart by antipyretics in combating a temperature that is not doing any great harm. In such a case the treatment may do more harm than the symptom against which it is directed. There are times, however, when high temperature calls for special treatment. Some children bear high temperatures well; others very poorly. In the latter, interference is promptly called for, and the indication for treatment is not so much the exact degree of temperature as a disturbance which is being caused by fever. In one case the temperature of 102 deg. to 103 deg. F. may require special treatment, in another one the fever needs no special treatment until 104 deg. or 105 deg. is reached. High temperature may result in extreme cerebral irritation, causing restlessness, or even convulsions; in others, stupor and even coma. The heart becomes weak and rapid; the respiration becomes rapid; digestion and assimilation always suffer more or less. It has been shown by experience that control of the high fever gives a certain measure of relief to these symptoms.

In croupous pneumonia the indications for interference in hyperpyrexia are not so

important as in bronchopneumonia, as the former runs a short course and tends to recover. The first point in the management of fever is to avoid any measures that will leave a bad effect, and thus hinder the future chances of recovery. All depressing remedies come under this head: as the coal-tar derivatives. The application of water is, on the whole, the safest and the most satisfactory method of controlling dangerous hyperpyrexia. Much may be accomplished by a thorough application of cold to the head. This not only reduces the temperature, but relieves to a certain extent its bad effect upon the brain and nervous system. In order to be effectual it must be applied continuously and thoroughly.

Finely cracked ice placed in bladders, from which the surplus air is expelled, may be moulded around the head, especially at the vertex and occiput. If this does not suffice, compresses should be applied directly to the chest. The child is stripped, wrapped in a blanket, and placed on a table; a stimulant is given and the feet are placed in contact with hot bottles. A compress sufficiently large to surround the chest is plunged into water from 70 deg. to 95 deg. F. and applied to the chest. This is changed every fifteen or twenty minutes. If this does not cause a reduction of temperature the temperature of the water can be lowered. The addition of about one-fourth part of alcohol seems to heighten its effect. The author invariably employs the tub, on account of the fright to the child and the exhaustion which it causes. In cases of cyanotic children, he has used a warm bath of 100 deg. with friction of the surface.

The treatment of pneumonia in very young children by Holt is summed up as follows:

1. No depleting measures are ever admissible.

2. Hygienic treatment, including fresh air, proper feeding, and intelligent care, is of the utmost importance.

3. No unnecessary medication should be permitted.

4. Many annoying symptoms may be relieved by local treatment, such as the cough by inhalations, pain by counter-irritation, restlessness by the ice-cap or sponging.

5. Stimulants should be deferred until demanded by the condition of the pulse.

6. High temperature is much more safely and effectively controlled by the use of cold than by drugs.

7. Greater caution is necessary in the use of powerful stimulants than is generally observed.

8. Rest is quite as important as in other serious diseases.

The Serum Diagnosis of Diphtheria.

Bruno, of Vieordt's Clinic (Berl. klin. Woch., December 19, 1898), says that the agglutinating action of diphtheria serum upon the diphtheria bacillus have been few. Bruno, according to Gaillard's Medical Journal, has investigated from this point of view serums obtained from experimentally infected animals, and from patients suffering from diphtheria. Quite recent broth cultures of the diphtheria bacillus must be used, as old cultures readily show a pseudo-agglutination. It should be remembered that the diphtheria bacillus has a tendency at the commencement of its growth to fall to the bottom of the vessel without any general turbidity of the fluid. This tendency may be overcome by making successive cultures when in the third to the sixth generation the bacillus causes a general turbidity and a diffuse growth in the bouillon.

If the reaction is positive a purely passive collection of the bacilli in small masses takes place. The reaction requires a longer time than Widal's serum test owing to the non-motility of the diphtheria bacillus. If the bacilli are too abundant in the hanging drop the reaction is obscured, as they tend to collect in the most dependent part of the drop. After examining the effect of the curative serum upon the diphtheria bacillus, Bruno made use of the serum from 44 diphtheria patients as well as from 12 normal individuals.

While some normal serums were without action, others produced agglutination in solutions of 1 in 10 up to 1 in 30, whereas the specific serum produced agglutination up to 1 in 400. The serum from some cases gave the reaction in twenty-four hours. Two cases gave quite negative results on the first and third days of the disease, 10 did not succeed in a dilution above 1 in 30, 31 no longer reacted in a dilution of 1 in 100, and 13 reacted above that dilution. The author then investigated the questions of the specificity and constancy of this reaction. He concludes (1) that the occurrence of agglutination is not constant for all diphtheria cultures and serums, (2) the clinical serum diagnosis is for this reason impossible, (3) the distinction between the true and false diphtheria bacillus is not to be effected by this means, and (4) that pure undiluted diphtheria serum possesses *in vitro* a slight growth-restraining action, but has no bactericidal action on the diphtheria or pseudo-diphtheria bacillus.

Paris Exposition.

Many members of the medical profession will be pleased to learn that if they visit Paris with their families next year for the purpose of seeing the famous exposition there will be an American "pension," intended for their especial benefit, at which straight American will be spoken, and they will have an opportunity of meeting with their fellow countrymen. It will be under the charge of Professor Wisner and his wife who are well and favorably known to many professional men in New York, Chicago, Cincinnati, and other American cities. They have taken a mansion in the neighborhood of the Bois de Boulogne, and will have it fitted up in such a way as to provide a comfortable home for their guests. Professor Wisner has already made engagements with a number of prominent doctors who intend staying at his establishment, and he would like to hear from others before he leaves for Paris. For the present he may be addressed at 605 Madison Avenue, New York.

Some Conditions Necessary for the Spread of Tuberculosis.

Arthur Ransome eight years ago, in conjunction with Dreschfeld, found that sputum containing quantities of tubercle bacilli retainted its pathogenic properties for months when exposed to the air in a small unhealthy hut, built without a basement on a clay soil; while another sample, exposed in a well-ventilated house built on a sandy soil, and with good sanitary arrangements, lost its virulence completely. In 1894, conjointly with Delepine, he found that over three days' exposure to free ventilation alone was required to disinfect sputum or pure cultures, while a very short time sufficed when they were exposed to air *plus* sunshine. These experiments suggested that there must be some substance in the air of confined spaces which favored the growth of the bacillus. Ransome has now obtained a liquid containing such a substance: (1) by freezing the expired air both of healthy and phthisical subjects, and (2) by condensing the vapours arising (*a*) from the contaminated soil of a town, (*b*) from a clayey, and (*c*) from a sandy soil. After estimating the free and saline and the albuminoid ammonia contained in these liquids, he thoroughly sterilized them, and then soaked pieces of folded filter paper or of ordinary wall-paper in them. Paper thus treated, whatever the original source of the liquid might be, proved to be an excellent culture medium when inoculated with a pure culture of the tubercle bacillus. Out of 18 specimens, 16 produced more or less vigorous colonies, and, of a second series of 37, only 1 failed to grow even when kept at ordinary temperatures. In the first series a little glycerine was added to the liquid, but in the second equally good growths were obtained on the soaked paper without this addition. These experiments prove conclusively that the tubercle bacillus is a saprophyte as well as a parasite, and that it can grow in the organic matter contained in expired air or in the vapour arising from the soil. They indicate also the nature of the danger of insanitary houses, and how the peril is to be avoided by the disinfecting action of sunlight and fresh air.

Ocular Troubles in Diabetes.

Dianoux (Annales d'Oculistique, October, 1898).

As regards the lens loss of transparency may occur, leading surely to cataract, soft or hard, according to the patient's age; he has not noticed variations in vision consentaneously with the evolution of the diabetes. The soft cataract develops exclusively in young people attacked with acute or pancreatic diabetes, and becomes complete in a few months. Rapid cataract in an adolescent should make us suspect diabetes. The grave form of diabetes has not the same action on the lens in the adult, in his experience; and he is doubtful whether in the chronic form cataract is of more frequent occurrence than in elderly people who are not diabetic. For senile cataract in the diabetic, operation may be perfectly successful; whereas operation for diabetic soft cataract is frequently followed seven or eight days later by pulmonary apoplexy and death, and in any case the patient rarely survives twelve or fifteen months.

Vascular lesions: retinal hemorrhages in diabetes are found exclusively in old people; the fact of their non-occurrence in the young makes him doubt their direct dependence on the diabetes; he would rather attribute them to arterio-sclerosis. By direct examination the hemorrhages are seen to proceed from small veins or capillaries; he has never seen one originating from an artery. The blood is absorbed in the course of some months, and vision may become normal again. But prognosis is bad; a fatal issue from cerebral softening is ever imminent, though health may be maintained for years. Albuminuric retinitis may be associated with diabetic changes.

Central scotoma: the principal symptom is progressive failure of central vision, particularly for reading; with the loss of form vision goes loss of color vision. As diabe-

tics are often alcoholic and indulge in smoking it is often difficult to attribute the scotoma to the one factor; but Dianoux had seen central scotoma in women and young people who did not take alcohol, but who passed large quantities of sugar. Unlike alcoholic and tobacco scotoma, diabetic scotoma never disappears.

Diagnosis of Mammary Abscess.

Dr. A. M. Shield (Clinical Journal, January 4, 1899). It may be thought that the ordinary diagnostic symptoms of acute mammary inflammation and abscess are so evident, that mistake would be out of the question. On some exceptional occasions a diagnostic difficulty arises in these cases which is of very great import, namely, the confusion between abscess and acutely inflamed, rapidly growing carcinoma or sarcoma. This is especially likely to occur if the growth be breaking down in the centre, or if it be of the nature of an inflamed carcinomatous cyst. Precisely the same diagnostic difficulties are found in suppuration in connection with carcinomatous glands of the neck, or suppurating epitheliomatous cysts in this locality. If an incision is made in this type of case, blood and broken-down debris escape, but seldom any pus. Fungation follows, with its attendant drain of bleeding and discharge, and the termination of such a case, where the diagnosis of abscess has been confidently given, may be very disastrous to the reputation of the surgeon who has committed the error.

The symptoms and diagnosis of chronic mammary abscess have long been notorious for their uncertainty. There are probably few surgical disorders which have been associated with more deplorable errors. The reader will do well to bear in mind—(1) That fluctuations may be quite absent in deep-seated chronic abscess, and local heat or general fever may be wanting. (2) That the leading signs of such deceptive accumulations of pus are mainly as follows:—(*a*) There is often a soreness or abrasion of the nipple to be found on careful inspection. (*b*) Firm pressure with the pulp of the index finger upon the centre of the swelling usually gives a sensation of yielding or elasticity; when the finger is removed slight œdema may be observed. Pain of a throbbing nature is not uncommon. (*c*) Exploratory incision is the only certain diagnostic means of discovering a chronic abscess of the breast when deeply seated.

Treatment of Hæmatemesis.

Raymond Tripier (London Lancet) gives in detail the results of his own investigations into the microscopic anatomy of simple gastric ulceration, especially those forms accompanied by hemorrhage. Briefly, they go to prove that hæmatemesis arises from primary inflammatory changes in the gastric arteries, leading to their obliteration or thrombosis, and to subsequent necrosis of tissue. He believes that repeated hemorrhages are due, not to the gradual destruction of one artery after another by the gastric juice, but to a continuation of the same inflammatory process in and round the vessels. The form of superficial ulceration described by Dieulafoy under the name of *exulceratio simplex* is also, in his opinion, due to a primary rupture of a vessel. This explains how, when operations have been undertaken for the arrest of the bleeding, in some cases no ulcerative lesions have been discovered, and why in the intervals between the attacks of hæmatemesis there may be no gastric symptoms whatever. Considering the risk of not being able to find the bleeding point, the writer is unable to agree with Dieulafoy that operation is the best treatment in these cases. Even when the ulcer is easily found, the results of operations for the arrest of gastric hemorrhage are not very encouraging, the mortality being 66 per cent. The routine medical treatment with astringents, etc., also frequently fails, and Tripier has been led to try a new method of combating hæmatemesis, and has had such success that he thinks it worthy of extensive trial. This consists in the reflex vaso-constrictor action of hot water applied as enemata. The same principle is used when the hands are thrust into hot water as a remedy for epistaxis. He first tried it in a case of recurring melæna, where it was uncertain whether the hemorrhage was of gastric or duodenal origin; then in a case of alarming intestinal hemorrhage during typhoid fever, and lastly in an undoubted case of recurrent gastric hemorrhage, where everybody else was agreed that surgery offered the only chance of life—in all with complete success. It is probable that the method may be equally useful in any hemorrhage, whether internal, for example, hæmotysis, or external. The details are as follows: As soon as melæna or hæmatemesis appears, enemata of hot water at 118.5 deg. F. to 120 deg. F. must be given three times a day or oftener if the hemorrhage continue, with as little disturbance to the patient as possible. For some days feeding should be entirely rectal, and this should be kept up as long as possible after the hemorrhage has ceased. The enemata, which

have the additional advantage of allaying thirst, should be continued morning and evening for eight days at least after the cessation of hemorrhage, and once a day until the health is quite restored. Even if the first hemorrhage is very slight, the treatment should be begun at once, since it might ward off a serious or fatal hemorrhage of which the first was a forerunner.

Puerperal Eclampsia.

Baron and Castaigne (London Lancet) have carried out an important series of experiments with a view of proving the fœtal origin of puerperal eclampsia. Within recent years pathologists have come to the conclusion that puerperal eclampsia is not due to material, renal, or hepatic diseases, at any rate wholly, but that absorption of toxic products from either the fœtus or its annexæ, as to whether the fœtus or the amnion is most to blame, forms the subject of the writers' investigations. They find that certain substances injected directly into the fœtus or the amnion are rapidly absorbed by the maternal organism, provided the fœtus is living, but much more rapidly from the fœtus than from the amnion. From this it would seem that the fœtus secretes certain toxic substance into the blood and amniotic fluid. What these toxins are is to form the subject of s subsequent investigation. Secondly, if the fœtus be dead. subtsances injected into either amnion or fœtus do not seem to pass into the maternal circulation. This would seem to throw considerable light upon the various phenomena of eclampsia, and especially as showing that the death of the fœtus is followed by cessation of the convulsive seizure.

Cæsarean Section in the Philippines.

Dr. Lobti (British Med. Journal, January 4, '99). Owing to well-known religious prejudices, craniotomy is doubtless rarely, if ever, practiced, but Cæsarean section after the death of the mother is not rarely performed as a religious duty. In 1821,the year when a deadly epidemic of cholera ravaged the Philippines, six *post-mortem* Cæsarean sections were undertaken in Bohol alone. The parish register contains a notification of the baptism of the children, two being reported as strong, and the remaining four likely to live. No serious comment need be made on this alleged saving of all the six infants who survived the algid stage of cholera and the death of the parent. In another village the same operation was undertaken in one case, and the child lived, it is said, seven hours. Even more incredible is the case of a woman in Cabancalan, Isle of Negros, who died pregnant; her abdomen was opened twenty-four hours after death. The child, it is related, showed every sign of life. Six years later, at Mandana, a child is said to have been extracted seven hours after the death of its mother. Not only was it reported as living but it is said to be yet alive to witness the truth of the report. In the Isle of Negros a living female fœtus was removed from the body of a woman who had been murdered two hours previously. Lastly comes an announcement—as long ago,we must observe, as December 12th, 1854—in the Official Bulletin of Manila. Cæsarean section was performed on the body of a woman five months pregnant five hours after her death. The fœtus lived for half an hour. Of the above statements, reproduced in the Journal d'Hygiéne, it may be confidently asserted that they include two facts mixed up with a mass of what we may gently term inaccuracies: first, that *post-mortem* Cæsarean section is often undertaken in the Philippines, no doubt more frequently than above reported; and secondly, that there is an extreme prejudice in its favour which makes the natives eager and ready to believe that the aim of the proceeding is not missed.

Hemorrhages from Anatomically Unaltered Kidneys.

S. Grosglik, according to the International Medical Magazine, states that renal hemorrhage is mostly of a symptomatic nature depending on an inflammation of the organ or renal calculus, renal tuberculosis and renal tumors. However, a number of cases have been observed in which the most careful examination excluded any of the abovementioned pathologic conditions, and, except simple hemorrhage, no anatomic changes were found. In these cases we must speak of an *essential renal hematuria*. The cases so far observed agree as to the fact that there is more or less of a hemorrhage from a kidney, the integrity of which could be well established either by operation or other means of clinical diagnosis. In single instances the hematuria was a local manifestation of a general dyscrasia-hemophilia. In others, it was observed that the hemorrhages resulted from excessive bodily exercise (horseback-riding, cycling, etc.) which produced a hyperemia of the renal blood vessels and consequent slight rupture of the smaller ones. But there remain many cases in which neither the one nor the other etiologic factor could serve as an explanation. Léguen in 1891 described a morbid condition of the kidneys which he called

"néuralgies rénales," colic-like pains, often accompanied by hematuria, occurring in the kidneys of nervous, hysteric individuals, not dependent on any organic renal lesion. This symptom Léguen explains by the hyperemia induced by the neuralgia. Later, Broca associated these hemorrhages not accompanied by pain with disturbance of the vasomotor nerves, and here comes into consideration mainly a fault in the vasomotor centers, which leads to a weakening of the vessel walls and overfilling of the small blood vessels resulting in a "vasomotor hematuria."

The Reaction of Syphilitic Blood to Mercury.

Kuperwasser (Edenburgh Medical Journal) instead of comparing syphilitic and non-syphilitic blood directly, with a view to determining what modifications the former undergoes during the disease—a method which has ulways yielded negative or contradictory results—has investigated the changes which occur in healthy and syphilitic blood after the administration of mercury. He classifies the white corpuscles, which, according to Ouskoff, all arise from one and the same element, namely, the small mononucleated lymphocyte, into (1) young, (2) mature, and (3) old leucocytas. The writer then shows (1) the blood of healthy people is modified by mercury in the following direction: The proportion of young leucocytes present is considerably increased and that of the old considerably diminished; (2) the blood of syphilitics reacts to mercury by a considerable diminution in the proportion of young, and a corresponding increase in that of old leucocytes. This reaction is independent of the stage of the disease, and takes place whether the patient has or has not previously been subjected to specific treatment of mercury and iodides. Those who have undergone treatment by mercury within four months of applying the blood test form the only exceptions to this rule. In such cases the reaction of syphilitic is replaced by that of healthy blood, possibly because the patient still retains a considerable quantity of mercury, or because under its influence the disease has become so attenuated that the blood gives a normal reaction. Kuperwasser believes that this reaction, based on the observation of 48 cases, will prove to be one of the most certain methods of diagnosing syphilis, and suggests that many disputed points, such as the relation of those diseases called by Fournier "parasyphilitie" to syphilis, might be solved by its general application.

Indications for Hysterectomy.

Dr. H. J. Boldt (Medical Record, Feb. 4th, 1899). The question arises, what should be considered an absolute indication for removal of the entire uterus? 1. Any woman who has a living child in utero, at term or nearly so, in whom the pelvic diameters are too small for the delivery of a living child per vias naturales. 2. When the child in utero is dead and an infection of the organ has taken place. 3. In cicatricial contraction of the vagina to such an extent as to prevent delivery through the normal route. 4. When a neoplasm is present in the collum uteri, preventing the passage of a living child, and the enucleation of such neoplasm is not feasible at the time of the Cæsarean section with safety to the mother. 5. In such cases of rupture of the uterus in which an abdominal section is indicated and suture of the uterine wound is unsafe. 6. In some cases of hemorrhage from atony of the uterus subsequent to Cæsarean section, as in a case reported by Clivio, in which he had completed the uterine suture, and, although no blood oozed from the stitch-holes, the hemorrhage per vaginam was so terrific that he found it necessary to change the ordinary Cæsarean section to a Porro operation. This author collected sixteen cases of similar character. Perhaps an intra-uterine gauze tamponade or steam vaporization may answer in some such cases. In cases of advanced cancer of the cervix, however, the Porro operation should receive the preference over total extirpation or the modified Cæsarean section.

Calomel in Typhoid Fever.

Andrievsky has made in the Russian military hospital of Krasnoie-Sielo a series of therapeutic experiments with the object of determining the value of calomel in typhoid fever. In 71 cases he gave calomel in a dose of 30 cg. thrice daily, while for the purpose of comparison he gave quinine in the same doses in 40 cases. The patients in the first group continued to take the calomel till their evening temperature became normal; this result was obtained after a total amount of the drug varying from 8 to 20 grams had been taken. Stomatitis never occurred, nor was diarrhœa aggravated. Moreover, the disease in all these patients was mild in type, and often aborted. The fever abated more quickly, and the mortality (2.82 per cent). was less than in the cases treated with quinine. No patient who was put on the calomel treatment within the first week of the illness died. Andrievsky states that although calomel is not a specific, it is a most useful remedy in typhoid fever.

The Cause of Bright's Disease.

That Bright's disease is rapidly increasing is a question concerning which there is no doubt in the minds of observing medical men. The cause of the increase of chronic Bright's disease is a subject that has been much discussed, and variously attributed to clinic conditions, alcohol, tobacco, and so on. It is more probable, however, that, as Dr. Gus Johnson has suggested, real degeneration is a consequence of long-continued elimination of the products of faulty digestion through the kidneys.

Fothergill affirmed that the starting-point of Bright's disease is liver incapacity. These two conditions are closely related. When the stomach fails properly to elaborate the food, and when the fermentations taking place in it are producing quantities of poisonous substances, such as ptomaines and toxines, the blood is flooded with these dangerous substances, and the liver, which has for one of its functions the duty of destroying poisons, is overwhelmed by the immense quantity of toxic substances brought to it in the portal blood. The incesant and exagerated labour required of it exhausts it, and it becomes chronically incapacitated for work. When to these poisons is added a considerable quantity of half-digested proteid matter, which must likewise be treated as so much toxic substance, it is no wonder that the liver breaks down.

It must be remembered that the liver is a closed door to poisons, while the kidneys are an open door. So long as the liver-door is shut, toxic substances absorbed from the alimentary canal cannot get access to the general circulation. The kidneys are thus protected from the injurious influence of contact with these poisonous substances. But when the liver-door is broken down as a result of long-continued indigestion, especially by the free use of flesh foods, which add to the poisons of the human system those produced in an animal's body, and at the same time furnish material out of which the largest possible amount of poisons may be produced in the alimentary canal, the resistance of the liver is destroyed, and as the result such large quantities of poisonous matters are poured through the kidneys into the urine that degeneration takes place in these organs as the result of their contact with these intestinal toxic substances.

The researches of Bouchard, Rogers, and others point very conclusively to the failure of the stomach and the liver as the primary causes of Bright's disease. First the stomach fails, then the liver breaks down, then the kidneys collapse, then come heart disease, dropsy, death. The use of tobacco and alcohol, and excesses of all sorts, by impairing digestion and breaking down the general resistance of the body, prepare the way for Bright's disease as well as for other chronic maladies. Bright's disease may be fairly considered simply as nature's penalty for heavy dinners, Christmas and New Year feasts, and other forms of gormandizing.

Treatment of Chronic Morphinism.

Hirt (Boston Medical and Surgical Journal) recommends first of all total abstinence from morphine. The first three days are the most difficult for the patient to overcome; but once passed there is hope for recovery. During these three days chloral (forty-five grains) or trional must be administered to combat the insomnia consequent upon the withdrawal of the drug. If the sleep is restless, patient is given a warm bath of thirty minutes' duration, followed by a cold douche. On the fourth day begins the treatment by suggestive therapeutics carefully conducted, at first suggesting general harm from morphine, and eventually creating in the patient a feeling of horror and repugnance towards the poison. Out of thirty-five patients treated in this manner, twenty-seven were entirely cured, two committed suicide during the first three "terrible" days, the rest were lost track of or relapsed.

Medical Progress.

Old Dislocations oe the Elbow.—Dislocations nowhere becomes inveterate and irreducible sooner than at the elbow. This is especially true in the young, where the developmental osteogenetic power of the periosteum is in full play, and where, consequently, the slightest injury or chronic irritation of the periosteum causes new bone-formation, the presence of which precludes the possibility of the joint surfaces reassuming their old relations. The soft parts, too, in growing individuals are much more easily modified in their development by irritative factors than later in life, so that hindrance to the reduction of a dislocation soon supervenes in the course of a case from faulty evolution of the involved soft tissues. Finally, the ultimate bone relations in joints and the nice correspondence of apposing surfaces are the results of pressure and counterpressure of the parts upon each other during growth, and this being absent, deformity of the bony parts of the joints necessarily follows.

The importance of the movements of the elbow-joints is very great, and, besides,

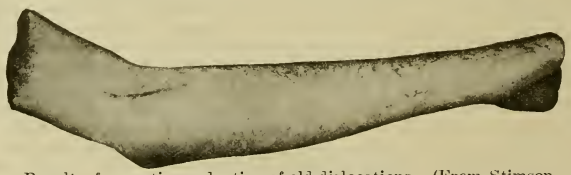
from an aesthetic stand-point, freedom of motion here is very desirable, since limitation of it always causes a striking peculiarity in the holding of the limb and awkwardness in the movement of it that are very noticeable. As stated before, reduction even by force soon becomes impossible. The necessity for early diagnosis and prompt reduction is greatly emphasized. Where inveteracy is once established, if the deformity is considerable, arthrotomy is indicated. The results of operative intervention have frequently in the past, however, been extremely unsatisfactory, and for two reasons: either too little of the abnormal structures that caused persistence of the dislocation were removed, in which case inevitably it recurred (often under the operation bandage); or too much of the bony structure was removed, an excision of the elbow being practically done, when a frail joint resulted—an eminently undesirable result.

Professor Stimson, in his new book on "Fractures and Dislocations,"* treats the subject with his well-known practical conversatism. He gives a sketch of new formation of bone on an old, unreduced dislocation of the elbow, as he has seen it in a number of cases. He advises operation for the condition by a long incision on the outer side, exposing the radius and the mass of new bone. This should be freely chiselled away and the capitellum exposed by free division of the soft parts, keeping the knife at a little distance from the bone, so as not to damage the periosteum. The sigmoid fossa is then cleared of fibrous tissues. A second incision is now made on the inner side, curving close behind the epitrochlea or its site, the ulnar nerve is drawn forward, and the olecranon freed. If the epitrochlea has been broken off and displaced upward and backward it must be detached from the humerus, preserving its relations with the lateral ligament. The clearing of the sigmoid cavity is then completed. The only obstacle to reduction, then, if there be one, will be the shortening of the flexor muscles of the hand, induced by their action in the abnormal position caused by the dislocation. If necessary they must be partly divided close to the humerus. Professor Stimson gives a picture of one of his results, which we produce. Altogether he has operated upon some ten cases by this method, and the results have all been flexion within a right angle and extension varying from 120 to 170 degrees, with preservation of rotation.

New formation of bone on an old, unreduced dislocation. (From Stimson on Fractures and Dislocations.)

Result of operative reduction of old dislocations. (From Stimson on Fractures and Dislocations.)

*A Treatise on Fractures and Dislocations, by Lewis A. Stimson, A. B., M. D., Professor of Surgery in Cornell University Medical College, New York. Lea Brothers & Co. Just issued.



Result of operative reduction of old dislocations. (From Stimson on Fractures and Dislocations.)

Tuberculosis of the Nose.

Dr. Moll reported before the last meeting of the Netherlands Society of Laryngologists two interesting cases of tuberculosis of the nose (Medical Age). The first, a woman thirty years of age, complained of nasal obstruction. The right naris was filled with a red, smooth tumor arising from the posterior part of the cartilaginous septum. At a corresponding point in the left nasal fossa there was a small ulceration. After removal of the tumor with a snare the septum was seen to be perforated. The perforation border was treated with phenol. Microscopical examination of the preparation showed a rich cellular stroma with many giant cells.

The second case was also a woman. Moll found the left nasal fossa obstructed by a large granular mass arising from the lower turbinate, which at first glance gave the impression of a carcinoma. Under narcosis the mass was removed with a sharp spoon and the galvano-cautery. The microscopic diagnosis established the tuberculous character of the specimen. The recovery was very rapid, but the writer had been recently informed by the patient's physician that she was again suffering from some trouble in the nose, probably tubercular. Usually such tuberculoma frequently recur.

In the discussion following this report Tervaert reported three cases of nasal tuberculosis, and Huysman also gave the history of a woman sixty years of age who had developed tuberculosis of the nose while acting as nurse to a case of pulmonary disease.

A House Epidemic of Syphilis.†

Thanks to a better knowledge of the dangers and modes of transmission of syphilis, and to superior habits of cleanliness, epidemics of the disease are rare in America; yet they occur among the lower classes of our population with greater frequency than is generally supposed. In the New York Medical Journal, of March 26th, the writer records one in which the disease was introduced into the family, according to the history, by vaccination, and in which every member of the family of eight was ultimately infected. The first case was a child of 2 years; then the mother, aged 34; then two girls, aged 9 and 14 respectively; then a boy of 4; then a girl of 7; and then a nurseling, aged 6 months. The father escaped until the last; but late in the spring he came to the clinic with a characteristic eruption, alopecia, &c. The cases were all severe; there were several irites; all had obstinate and some very extensive mucous patches; and the 2 year old child had a syphilitic pneumonia. The site of inoculation was discoverable in two cases only, probably on account of the lateness and irregularity with which the patients were brought to the clinic. In the mother it was upon the center of the cheek, and in one girl it was upon the eyelid. The family was very poor, living in one room, and their habits were very uncleanly.

†Author's Abstract by William S. Gottheil, M. D.

Ringworm of the Scalp.

Dr. J. C. Gilchrist (Gaillard's Medical Journal. 1898. Vol. lxix., No. 5).

This disease is due to the presence of a parasite known as tinea tonserans. This disease is limited to children and is practically never met with in adults. The usual typical appearances, such as a distinct circular patch, covered with light scales and stumpy hairs, which are usually pulled out or almost fall out by themselves, are always recognized. The variety which is difficult to diagnose and yet is comparatively common is characterized by a scaly condition of the scalp in patches, though no circular areas are met with. On careful examination of these areas a few stumpy hairs, or hairs which are broken off near the scalp, can usually be found, and the diagnosis is easily confirmed by soaking one or more of them in liquor potassæ and examining with a high power of the microscope, when numbers of spores will be found invading and clinging to the hair-shaft.

Balsam of Peru in Scabies.

M. Descouleurs, says the Medical Age, has published a series of cases (300) of itch treated successfully by frictions with Peruvian balsam, following the method recommended by Petters, Nothnagel, and Rossbach.

Peruvian balsam seems to act as a tonic on the acarus. Placed on a watch-glass and in contact with sulphurous vapors, these insects die only at the end of sixteen hours, while in flour of sulphur or the classical ointment they can live one hour or more. Descouleurs having placed le acara in contact with Peruvian balsam, found that two died after ten minutes, and the remainder after twenty. The mode of application is simplicity itself. It suffices to rub in the balsam gently over the surface of the body. No preliminary soap-bath is necessary. However, a bath is recommended the following morning more for cleanliness than from any therapeutic purpose. Generally

one application is sufficient, but the remedy may be employed two or three times if necessary, as it causes no irritation of the skin. M. Descouleurs believes that the balsam should take the place of every other agent where the skin is unusually tender, and the seat of impetigo, ecthyma, eczema, and in cases of young children. It is also particularly useful in pregnant women, who cannot generally take baths. There exists no counter-indication to its employment, and it is particularly appreciated by the patients in private practice, not only on account of its simplicity, but also for its agreeable odor.

The Craze of the Medical Profession to Affix Titles to their Names.

Dr. T. J. Hillis (Medical Record, February 18, 1899). This must be a subject of deep concern to all who have the interest of the medical profession at heart. The craze of the doctor of to-day to have himself dubbed as a professor or lecturer somewhere or other—any place is better than none, if it were only to go in and lecture to dry bones in a graveyard or to trees in a forest —the name of lecturer, only the name. It will give him an opportunity to write about something he does not understand, and have people read it, by prefixing professor or lecturer. If it could be professor of practice or professor of surgery, so much the better; but, as was said before, professor of anything is better than nothing. We really must make him professor of something or other, somewhere, anywhere, to a Barren, a Blackwell, or some other island, otherwise he will pine away and die.

Once upon a time, travelling in Kentucky or the Carolinas, about every second man one met on the highway was a colonel or a brigadier-general. To-day in the City of New York, and doubtless other cities of the Republic, every other doctor one meets in the streets or the sick-room is a professor or lecturer in some hospital, infirmary, or dispensary. It may be further observed in looking around and visiting the haunts of the doctor, that the younger the physician the more likely is he to be a professor. Take up a journal, a provincial one preferred, in which it can be seen that most of the articles are decorated at the top with professorships, honorary degrees, etc. This rider the writer displays at the head of his article probably because it has no other merit to recommend itself to the reader, or he may wish by it to draw away the reader's attention from the neighboring article by some medical man who makes no pretension to be anything more than a plain doctor—a recorder of facts and experiences as they present themselves to him.

It is foreign to the writer's intention to do anybody a wrong, or to strike at honorable and manly efforts on the part of every member of the profession to which he belongs. It should be the ambition, as it is their privilege and their right, to lead in their chosen calling and run in the race for honors in the greatest of all professions, and no man has a right to ask them to desist from such honorable purpose; but he does object, and very decidedly too, to hippodroming and the back-door entrance, and other underhanded and crooked work in the race for place in the grand medical handicap to which we are all subscribers, and so few of us beneficiaries.

The Treatment of Incontinence of Urine in Children with Rhus Aromatica.

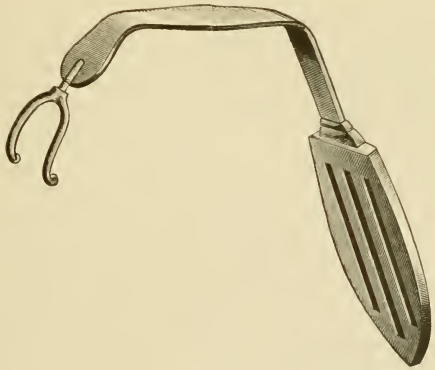
Freyberger (Treatment, 1898, No. 5). This was first used in the treatment of incontinence of urine caused by an atonic state of the bladder. Burvenich believed that it was a powerful tonic for the bladder, acting similarly to nux vomica. According to Numa, it stimulates the unstriped muscle of the bladder as well as that of the uterus and rectum. During the past three years one hundred and ten instances of enuresis have been under observation. Leaving out those in which the symptom was due to phimosis, preputial adhesions, hypospadia, urinary hyperacidity, cystitis, nephritis, or glycosuria, there remained altogether sixty instances of the use of this drug. Of these, thirty are tabulated, because a sufficiency long time has elapsed since their discharge (nine months to two years) to enable an opinion to be given as to a permanent cure. Patients who had previously received belladonna, strychnine, or tonics without success were at once put upon this treatment. Others underwent a preparatory treatment, which consisted of regulation of the diet, sleeping upon a hard mattress, the use of light coverings, and cold sponging along the spine. The children were taken up once or twice during the night and made to pass water. The formula is: Fluid extract of rhus aromatica, 1; aromatic syrup, 2; distilled water, 6, which conceals the astringent taste and disagreeable odor. The dose varies from five to ten minims (two to five years); ten to fifteen minims (five to ten years), with a maximum of twenty minims for older children. Of the thirty instances recorded, twelve boys and eighteen girls, cure followed in eighteen, eleven boys and seven girls; improvement in ten, one boy and nine girls; and no improvement in

two girls. "Cure" is intended to mean that at least nine months have elapsed since enuresis has occurred for the last time. The average duration of treatment was thirty-four days in boys and forty-five in girls. Thirty-three days, on an average, were sufficient to produce a permanent cure, fifty-three to effect a permanent improvement. It would be rash to claim this remedy as a specific, but it certainly appears to be as efficacious as belladonna, may be given for a long time without the slightest ill effect, and good results may be obtained when the latter proves ineffective.

Forced Examination of the Larynx in Children.

It is sometimes extremely desirable to have a chance to make a detailed laryngoscopic examination of young children. One is apt to hesitate, however, to employ general anæsthesia, and parents will object to anæsthetics unless some operative procedure is intended at the same time. Besides, laryngoscopic examination under an anæsthetic is usually unsatisfactory. For a physician who does special work on the throat some method of accomplishing this purpose of laryngoscopic examination of children is absolutely necessary.

In the forthcoming number of "Progressive Medicine,"† the new quarterly review of current medical progress, Dr. A. D. Blackader, of Montreal, will describe two novel methods. The first is Escat's suggestions, and is instrumental. He has devised a peculiar form of tongue depressor, as shown by the acompanying figure. As may be seen in the illustration, the instrument is curved so as to adapt itself exactly to the base of the tongue. On the distal extremity a blunt fork is fixed, of which the two branches descend, one on either side of the epiglottis, ending in two rounded points which, when the instrument is used, are supposed to lodge in the pyriform sinuses on each side of the laryngeal orifice. The instrument serves, therefore, not only to control the tongue, but to pull forward the rima glottidis from the posterior wall of the pharynx, and so to provide good conditions for the employment of the laryngoscopic mirror. It is probable that on the principles used by Kirstein, in what he calls autoscopy, i. e., laryngeal examination without a mirror, the examiner will be enabled with a little practice, to see a good deal of the larynx (especially its posterior part, which is the more important one), by direct vision, and without the use of the mirror. The method of the manipulations with the new instrument is well illustrated

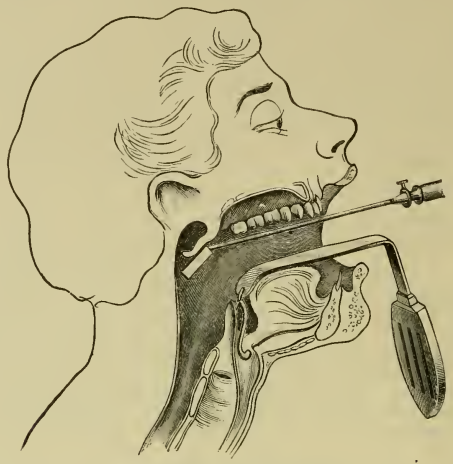


in a diagram presented. In the second diagram the position of the instrument in the throat is well shown. It will, as a rule, be necessary, even with the instrument, to have the movements of the child restrained by a sheet rolled around its arms and legs in the usual way, and to have it carefully held on the knees of an assistant, but with this the examination of the larynx can be made much more satisfactorily than with the ordinary tongue depressor.

A simple method for the examination of young children is also given in the same number of "Progressive Medicine," which seems extremely practical and well worth

†Progressive Medicine. A quarterly Digest of new methods, discoveries and improvements in the Medical and Surgical sciences, edited by Hobart Amary Hare, M. D. Volume I, March, 1899. Lea Brothers & Co., New York and Philadelphia.

noting. It was demonstrated by Lack, at a meeting of the Laryngological Society of London, about a year ago. The advantage of this second method is that no special instruments are required and no force is employed. It is described by Dr. Blackader as follows: "The infant is placed in the usual position for laryngoscopy, the index finger of the left hand is passed well into the mouth, and the terminal phalanx hooked around the hyoid bone, which is pulled forward. The rest of the finger acts as a tongue depressor, the knuckle as a gag, while the left thumb under the chin serves to steady the head. With the use of a small mirror the larynx can now be easily seen. The method causes no pain, and requires no anæsthetic, while the younger the infant the less is the resistance and the easier the examination." These manipulations certainly commend themselves by their ease and simplicity, and it would seem that the method deserves thorough trial that its merits may be tested in practical use.



Intussusception in Children.

Dr. Edward Martin (Therapeut. Gazette) thinks the following conclusions are justifiable:

1. The affection is a rare one in any one locality or in any individual experience. The general impression among medical men to the affect that it is common has not the support of either hospital records, vital statistics or personal inquiry.

2. Gastro-enteritis is a distinct predisposing factor.

3. The diagnosis of infantile intussusception from severe entero-colitis in the absence of tumor may be quite impossible. Fortunately tumor is present in over 80% of cases. Often it has not been found because search has not been made for it. Sudden and violent onset, frequent small blood-stained mucous passages, and the rapid minimizing of the quantity of feces passed would suggest intussusception. Under such circumstances palpation should be practiced, one finger being passed into the rectum, the other fingers of the other hand being applied to the abdominal surface. When there is reasonable doubt the child should be relaxed by ether before such an examination is made. The tumor is necessarily on the left side, being found in a small percentage of cases to the right.

4. The first attempt at reduction should be thorough and final. This is most likely to be successful if practiced upon the thoroughly anesthetized child. The method of choice is the slow injection of normal saline solution by gravity at a temperature of about 102 degrees F., and under a pressure of at first four feet, not greater than eight feet, after ten to fifteen minutes. Inversions and gentle massage aid in accomplishing reduction.

5. Reduction by injection should not be attempted in hyperacute cases which have lasted more than twenty-four hours. Nor in acute cases which have lasted twice this time. Immediate operation is safer for such cases.

6. Reduction by injection having failed, there should be immediate recourse to celiotomy and direct disinvagination, or if this procedure is impossible, ligation and resection of the adherent and sloughing mass

practiced through a small incision through the intussusception, and union of the divided bowel as in the Mounsell method. The portion of the gut cut away may be delivered through the anus.

Artificial Dilatation of the Mouth of the Uterus During Labor.

Demelin (Journal Med. Sciences) contributes a paper upon this subject, giving the results of his experience in artificial dilatation of the mouth of the womb during labor. The method which he advocates is bimanual dilatation, inserting one or more fingers of each hand within the cervix and gently enlarging the os, until all the fingers can be introduced.

He employed this method in treating eleven cases of vicious insertion of the placenta and had among these patients no deaths. In eclampsia the method has given him satisfactory results. It is, of course, to be employed only when labor has already begun. If the patient shows no signs of labor, the eclampsia and toxic condition present must be treated independently of labor. If, however, such treatment produces no improvement after a reasonable time, labor ought to be induced.

He recommends this method in sudden death or threatened demise of the mother, in place of Cesarean section. In the interests of the fetus, this method may also be employed with a good chance of success. This is especially true where the cord is compressed or where the amnion has become infected.

This treatment is especially indicated in abnormal presentations, such as the brow, the parietal bone, and cross births. It may occasionally be employed together with other operations, as before symphysiotomy and often before the high application of axis-traction forceps. When labor is so prolonged that maternal exhaustion is threatened, this method is also indicated.

Demelin lost two of his forty-nine patients, one from eclampsia and one from apoplexy. He urges caution lest the operator extract the child before complete dilatation has been secured.

Frequency of Rickets.

J. L. Morse (Boston Medical and Surgical Journal, Feb. 16, 1899) discussed this subject at a recent meeting of the Suffolk District Med. Society. He states that four hundred consecutive infants under two years of age, medical out-patients of the Infant's Hospital, were examined for evidence of rickets. Eighty per cent showed more or less marked signs. A rosary was present in every case. Only the enlargements were considered as rosaries which could be felt both parallel and vertical to the long axis of the rib. It was the only symptom in 40%. The single associated symptom most often delayed dentition; next, enlargement of the cranial eminences. Delayed dentition occurred in more than 50%. Large fontanel, large eminences, retraction at the diaphragm, and enlargement of the epiphyses of the extremities were each present in about 15%, but were symptoms of later development. Marked rachitic deformities were rare. About 40% of the cases were Russian and Polish Jews. Only 12% came from the Southern races. Breast milk was a part of the diet in 43%, and formed the whole in 18%. The only influence acting on all alike was improper hygienic surroundings; these, therefore, must be considered as the most potent cause of rickets in Boston and vicinity. Race and diet are unimportant causes.

In conclusion the author says that 80% of the children under two years of the poorer classes of Boston and the adjucent cities have rickets. A rosary is not a normal phenomenon, but is an evidence of rickets. It is the earliest and most constant symptom of rickets. In 40% of all cases under two years it is the only symptom. Other symptoms, while they may show themselves at any age, do not, as a rule, develop earlier than the tenth month.

Treatment of Hip Disease.

B. E. McKensie (Canadian Practitioner and Rev.) gives an interesting review of this topic. He says:

Hip disease is a local manifestation of a constitutional disease.

Early operative interference is seldom justifiable.

As soon as softening can be determined the surgeon should operate and obey indications, observing all care not to injure needlessly the mechanical integrity of the joint, and knowing that he is but aiding nature by removing tissue that she has already cast off.

In the management of the wound the principles of asepticism and antisepticism must be carefully observed.

From the earliest moment efficient protection for the joint should be secured and constantly maintained by a well-fitting mechanical appliance.

Constitutional treatment is indicated as in other tubercular affections. Great emphasis should be laid on obtaining the freest exposure to sunlight and fresh air.

After excision a perfect recovery is never

effected, the mechanical integrity of the joint having been interfered with.

Following mechanical and constitutional treatment, perfect restoration of function is sometimes secured.

Even when softening of tissue occurs and necessitates incision, there is sometimes a perfect restoration and frequently a highly useful return of joint function.

Tumors of the Kidney in Children.

Dr. J. H. Morgan (Lancet, No. 3887). Tumors of the kidney in childhood are almost without exception, malignant, and the great majority are of the nature of sarcomata, though a few bear affinities to the adenomata, and in rare instances show pigmentation. They are by far the most frequent of all malignant tumors occurring in the abdomen in childhood, and originate either from the cortex and invade the gland or in the perirenal tissue. Very rarely they commence in the adrenals, sometimes surrounding, sometimes infiltrating, the whole of the kidney. By pressure the tumor may cause hydronephrosis, and adhesions may be found to other structures. The pressure effects may cause ascites or œdema of the lower extremities. They are frequently bilateral. Neither traumatism nor antecedent disease has much to do with their origin.

Occurring for the most part in very early life, and confined at first to one side of the abdomen, they present a smooth, rounded outline as distinguished from the sharp edge of an enlarged liver or the notched surface of an hypertrophied spleen. On bimanual examination they are found to be movable but attached to the neighborhood of the lumbar spine. They grow forwards and do not bulge in the lumbar region. Though dull on percussion, except where crossed by intestine, they are often so soft as to give an obscure sense of fluctuation, and have thus been mistaken for ovarian cysts. They are invariably crossed by a portion of the colon, and in an early stage are influenced by the movements of respiration. There is generally a space into which the fingers can be pressed between the upper margin of the renal growth and the ribs.

So rapid is usually the advance of these neoplasms that they present only two symptoms in their earliest onset, viz: that of a large, rounded tumor commencing in the loin, which most often is the first indication and hæmaturia. In 12% this latter is said to be the primary symptom. Both might well, in the earliest onset, be mistaken as due to hydronephrosis or the presence of calculi in the pelvis of the kidney. But the nature of the swelling is soon evidenced by the rapidity of its increase, and the hæmaturia differs from that resulting from calculous or scrofulous pyelitis in its abundance and its intermittence, the urine in the intervals being clear. It may be so abundant as to form clots in the bladder or ureter, when pain will occur as an additional symptom. If hæmaturia occur without an assignable cause the patient should be strictly watched for several weeks. By this means Israel found a growth very early and removed it successfully. Cachexia does not appear until late, and then the wasting is rapid and the effects of pressure become evident in dyspnœa, vomiting and indigestion.

Points in the Arsenical Caustic Treatment of Cutaneous Cancers.

Dr. William S. Gottheil arrives at the following conclusions: (St. Louis Medical and Surgical Journal).

1. The arsenious acid caustic treatment of skin cancers does not contemplate or depend upon the actual destruction of the new growth by the caustic.

2. The method is based upon the fact that newly formed tissue of all kinds has less resisting power than the normal structure when exposed to an irritation and its consequent inflammation. Hence the former breaks down under an "insult" which the latter successfully resists.

3. If, therefore, the whole affected area can be subjected to the influence of an irritant of just sufficient strength to cause a reactive inflammation intense enough to destroy the vitality of the new cells, the older normal cells will survive.

4. Arsenious acid of properly mitigated strength is such an agent, and its application causes an inflammation of the required intensity.

5. It, therefore, exercises a selective influence upon the tissues to which it is applied and causes the death of the cancer-cells in localities outside the apparent limits of the new growths, where there is as yet no evidence of disease.

6. It is superior, in suitable cases, to any method, knife or cautery, which requires the exercise of the surgeon's judgment as to the extent to which it is to be carried. That that judgement is often wrong, and necessarily so, is shown by the frequency of recurrence under these methods even in the best hands.

7. It is applicable to all cutaneous carcinomata in which the deeper structures are not involved, and which do not extend far on to the mucous membranes.

8. It is easy of application; it is safe; it

is only moderately painful; and its results compare favorably with those obtained with other methods.

The Causes of Albuminuria.

Dr. F. Taylor (Med. Record, April 1st, 1899,) in considering the reason why albumin appears in the urine in Bright's disease we must remember that the occurrence of albuminuria is not limited to cases of nephritis, but accompanies a variety of other disorders. The different conditions under which albuminuria has been observed may be enumerated as follows:

I. Arising in the kidney—1. Acute and chronic nephritis and contracted kidney, forming Bright's disease; consecutive nephritis and cystic kidney. 2. Supurative nephritis. 3. Degenerative changes, such as lardaceous disease and tuberculous kidney. 4. Acute febrile processes, probably causing temperary degeneration of the renal cells. 5. Venous obstruction in diseases of the heart and lungs, and local disturbances of the circulation. 6. Malignant endocarditis and embolism and renal arteries. 7. New growths and parasites. 8. Temporary obstruction of the ureters. 9. Nervous disorders, such as apoplexy, convulsions, and concussion. 10. Chronic general disorders, like leukæmia, diabetes, and anæmia. 11. Dirturbances of digestion, and disorders of a temporary nature, including so-called cyclic and physiological albuminuria. 12. The influence of certain poisons, and the presence in the blood of forms of albumin other than serum albumin.

II. Arising in the urinary passages below the kidney—1. Disease of the pelvis of the kidney, calculous pyelitis, and tuberculous disease. 2. Tuberculous disease of the ureter. 3. Cystitis and tuberculous disease of the bladder.

Thrombosis and Embolism After Childbirth.

Singer shows that thrombosis and embolism is an important complication of childbirth, and one which is often overlooked. He reports thirty-five instances of its occurrence. From a study of these cases the following conclusions are drawn: (Medical Standard, April 1899.)

Formation of the thrombus is preceded by an irregular rise in the pulse rate. This rise is associated with the development of the thrombus, and the maximum is reached when the thrombus is completely formed or symptoms develop in the lungs.

The curve of the pulse is characteristic. In a typical pulse-curve in thrombosis the pulse rises, while the temperature remains normal. It remains high until the development of edema or a palpable hard cords or symptoms referable to the lungs cause the temperature to rise. If in the next few hours or days the temperature falls the pulse still remains high for some days longer.

A variation from this type is found in those patients in whom other causes have produced high temperature before the development of thrombus.

In such cases the thrombus is apt to be an infected one, and the discharges of the patient should be carefully examined in order to ascertain the character of the infection.

Such examination will often reveal the presence of gonococci.

The good results from the treatment of thrombosis follow its early direction, hence it is of importance to note carefully the pulse-curve as well as that of the temperature.

Rest in bed is the most important part of the treatment. Above all things the patient must not be allowed to sit up or stand up. The pulse is the absolute guide. The patient ought to be kept in bed at least three weeks after the pulse has become normal.

The Use of Quinine inTopical Leucorrhea.

Dr. Hardwicke (Canadian Practitioner) speaks as follows about the topical application of quinine to the mucous membrane of the cervix uteri and vagina in cases of leucorrhea: A patient, the mother of six children, who had been a sufferer from the above complaint for some years, having used the various remedies usually prescribed in such cases but with only temporary benefit, her trouble sooner or later recurring, adopted the use, from prudential motives, of what proved to be quinine pessaries. Since using them not only had her leucorrhea dissapeared but her general health had improved. I have since used quinine topically in several cases of simple leucorrhea always with great success—in fact, I do not know of a single instance in which it has failed or in which quinism has been produced. It may be used in the form of douche or pessary. I adopt the latter form as being obviously the better one; the drug has a better chance of closer and more continuous contract with the congested membrane. I prescribe three grains of the hydrobromate in a half-drachm pessary in combination with oleum théobromatis, but the pessus quininæ of the "Extra Pharmacopeia" containing the hydrochloride answers just as well. One insertion a day is generally sufficient.

The North Carolina Medical Society.

This Society will meet in Asheville, Tuesday, May 30th. The railroads will give reduced rates, beginning May 24th. This will enable the members of the Board of Medical Examiners to take advantage of the low rates.

Limits of Usefulness of the X Rays for the Diagnosis of Fractures.

On their first introduction it was thought that the X-rays would give absolute and immediate assurance of the presence of fractures in bones and make it possible to dispense with the ripe clinical experience usually considered so necessary for exact diagnosis in the matter of certain fractures. Most of this promise has been fulfilled, but practical experience and the collation of expert opinions have shown that the X-rays have their limit of usefulness, and clinical experience is still of the greatest service in the diagnosis of these difficult conditions. The greatest care is necessary in the application of the X-rays in these cases, so that the position of the limb will not produce on the plate an impression of seeming deformity. Familiarity with skiagrams of the part is indispensable to the formation of an opinion in many cases as to the character of the displacement or solution of continuity that seems to be present in a given case. As a rule, practical expert knowledge of skiagraphy is necessary for reliable results in difficult cases, and even then the best results can only be secured by one who has a thorough clinical experience in the matter of fractures and dislocations, and who is able to decide intuitively, as it were, what is the position that will bring out the deformity present. Under the circumstances the courts have done well to decide, in several cases where X-ray pictures were introduced as important evidence in damage suits, that as yet surgical opinion is not clear as to their absolute value in any given case, the angle at which they may be taken, the distance of the tube of origin of the rays and of the object to be skiagraphed from the sensitive plate, and, finally, the position of the part being factors in the production of appearances in the resultant skiagram that is impossible to properly value with absolute certainty. Recent series of skiagrams tend to confirm these opinions, and Professor Stimson has done well to illustrate this important point in an excellent series of skiagrams presented in his new work on "Fractures and Dislocations."*

We note among them a bimalleola Pott's fracture by inversion in a boy of fourteen years. The external malleolus is separated at the epiphyseal line, and the fracture shows very clearly. The fracture of the internal malleolus does not show in the skiagram, though recognized clinically by indubitable signs.

*A Treatise on Fractures and Dislocations, by Lewis A. Stimson, A. B., M. D., Professor of Surgery in Cornell University Medical College, New York. Lea Brothers & Co. Just issued.

Typhoid Fever in the United States.

Professor Osler's brilliant address on the above subject, delivered before the Medical Society of the State of New York on February 1st, is one that should be read carefully and digested slowly by the sanitarians of this country. The Medical Record of April 1st, 1899, refers to the address editorially. The following are a few of the favorable comments. After referring to the splendid work accomplished by the medical men of America in investigating typhoid from the beginning of the century to the present time, and after alluding to the fact, not generally recognised, that it was American scientific men and not Sir William Jenner who first distinguished between typhus and typhoid fever, Dr. Osler briefly reviews a few points in regard to the increase of knowledge of infectious diseases during the past half century. He shows how effectually sixty years of sanitary reform have swept away typhus and cholera, that we have learned to fight cholera and diphtheria, that in a hundred other ways the prevalence of infectious diseases has been lessened, and, lastly, that with a clean soil and pure water typhoid fever disappears. Regarding the lethargy of Americans as to public sanitation, Dr. Osler remarks: "This is a nation of contradictions and paradoxes. A clean people, by whom personal hygiene is carefully cultivated, displays in matters of public sanitation a carelessness which is simply criminal. A sensible people, among whom education is more widely diffused than in any other country in the world, supinely acquiesces in conditions shameful beyond expression." Dr. Osler has this to say concerning the solution of the problem of typhoid fever:

"The problem will be solved when, first, every city in the Union has a supply of pure water (including ice) and is properly drained; secondly, when suburban and rural hygiene is systematically organized. The responsibility for the widespread prevalence of the disease rests directly upon the wanton carelessness of the people. God's own country, with man's own backyards and the devil's own cesspools, ex-

presses the existing conditions. A threefold duty devolves upon the members of our profession—first, to preach cleanliness!! cleanliness!!! second, to give a loyal and willing support to the State health officials; and, third, to guard every case of typhoid fever as a centre and possible source of further infection."

These stinging words will find an echo in the heart of every medical man in the country. When the people have been brought to understand the absolute necessity of public hygiene, then, and not till then, will the typhoid pestilence be stayed.

A Memorial of the Late Dr. Joseph O'Dwyer.

A committee of over forty physicians, representing sixteen different medical societies of the city of New York and including representatives of both schools of medicine, has been formed for the purpose of doing honor to the memory of Dr. Joseph O'Dwyer.

The first meeting was held at the New York Academy of Medicine, on November 22, 1898, under the chairmanship of Dr. Joseph D. Bryant, and was mainly devoted to organization. Dr. George F. Shrady was elected permanent chairman, and Dr. Alfred Meyer permanent secretary, and the following committee on scope and plan was appointed: Dr. Dillon Brown (chairman), Dr. Robert Abbe, Dr. R. G. Freeman, Dr. L. Emmett Holt, and Dr. Louis Fischer. At the second meeting, held at the Academy of Medicine on March 13, 1899, the report of the committee on scope and plan was adopted and now only awaits final action of a meeting of the full committee.

The memorial to Dr. O'Dwyer will probably take an educational form, for by the plan now outlined it is proposed to raise a fund of thirty thousand dollars, the interest of which shall support two O'Dwyer fellowships in pædiatrics, open to competition by physicians who graduate in the United States and to be held by the successful competitors for a period of two years. During this period they must furnish satisfactory proof of their engagement in original research work to a committee of five, one of whom shall be appointed by the president of Harvard University, one by the dean of the Johns Hopkins Medical School, one by the president of the University of Pennsylvania, one by the president of the University of Chicago, and one by the president of the New York Academy of Medicine.

Many details of this general plan are still to be arranged, which the secretary will furnish to the medical press of the country so soon as they are finally decided upon. This preliminary notice has for its object merely to acquaint the profession with the fact that a movement of this nature is on foot, and that an effort will be made to give it the international character so fitting as a memorial to an investigator of international reputation.

Protective Action of the Liver Against Microbes.

Roger (Paris Society of Biology,) in 1897 found that certain cultures of anthrax bacillus introduced into a branch of the portal vein did not kill rabbits, whereas cultures of the same virulence injected into other blood-vessels did cause death. He then found that the lungs possessed a protective action against the streptococcus, while the liver possessed none. The staphylococcus aureus grows rapidly in the brain, but, like the antrax bacillus, is destroyed by the liver. The liver seems to be powerless against bacillus coli, and even to favor the growth of this microbe. Both liver and kidney arrests the growth of oidium albicans. Recently Roger has made further experiments on rabbits to determine what conditions modify the protective action of the liver. This protective action is less marked when the animal is kept without food, but remains observable even after three days of fasting. If three fourths c.cm. of a sterilized culture of bacillus prodigiosus injected into an intestinal vein, the liver loses all its protective power against staphylococcus aureus. Large doses of glucose—given by the mouth—weaken the protective power of the liver, whereas small doses increase it. The effect of ether is most striking; five drops of ether injected into the portal vein, or two c. cm. given by the mouth, abolish the protective action of the liver, whereas small doses by the mouth—two or three c.cm. of a solution of ether in alcohol and water—increase it. When the ether is injected subcutaneously its effect is much less marked. Perhaps the beneficial action of potions containing ether, in the case of patients with infectious diseases, may be explained on the supposition that dilute doses of ether given in this way increase the protective action of the hepatic cells against microbes.

Removal Notice.

On April 1, 1899, Messrs. Reed & Carnrick removed their business from their former location to their commodious new factory building, Nos. 42, 44 and 46 Germania Avenue, Jersey City, N. J. Their post-office address, until further notice, will be P. O. Box No. 3042, New York City.

The Bacillus of Syphilis.

Van Neissen has made some interesting experiments on the cultivation of a micro-organism from the tissues and blood of syphilitic patients, and the production of symptoms resembling syphilis in animals after inoculation of the cultivated microbes. He claims, says Treatment, March 23, '99, to have found a strepto-bacillus in the secondary stage. For purposes of cultivation he employed bone marrow and the cartilaginous parts of the epiphyses of the long bones and ribs from infants with hereditary syphilis, and also from secondary syphilitic products. The pieces removed were washed in percloride of mercury, split longitudinally, and scraped with a spoon sterilized by heat; and portions removed by the spoon were cultivated on bouillon, and afterwards on agar, serum and gelatin. A small streptobacillus or streptococcus was found regularly, this being identical with an organism Van Neissen had formerly found in the blood in cases of paralytic dementia and tabes dorsalis. Van Neissen considers this organism specific of syphilis. Inoculations were made subcutaneously and by intravenous injection in pigs and rabbits. In the former there was slight induration at the point of inoculation, followed in eight or ten days by bright red spots on the skin, which disappeared in about a week. In the rabbits there was typical induration at the point of inoculation, after which the animals were paired. and the female gave birth to seven dead fœtuses, two of which had the appearance of syphilitic maceration.

Examination of the blood in the secondary stage of syphilis gave mainly negative results, and from this the author assumes that the contagium is at this time for the most part confined to the skin.

The Preparation Needed for a Case of Labor.

Dowling Benjamin, M. D. (International Medical Magazine, Feb., 1899).

Fully half of the deaths that occur at the confinement period are due to infection, septicemia, or blood-poisoning, in consequence of germs getting into the system through the abrasions caused by parturition. Aside from any other lesion, there is always, after every confinement, a large, raw surface left on the interior of the womb by the separation of the afterbirth, which is one of the most dangerous culture fields for the growth of disease germs, and permits their ready entrance into the woman's system.

For the proper and successful care, therefore, of a mother at this important period of her life, it is of the *greatest* consequence that we not only understand but apply the principles of asepsis.

Since the alert members of the profession have thoroughly comprehended this subject, child-bed fever has been so rapidly diminished in frequency as to arouse the hope of causing, ultimately, a case to be considered a rare curiosity.

How shall we proceed to secure our patients against the dangers of sepsis? Call upon your patient shortly after having been engaged, and explain to her the importance of this subject, and, as well as you can, briefly the principles involved. Then give her the following directions:

1. Keep away, if possible, from all contagious and infectious diseases.

2. Avoid sores (wounds included), and especially erysipelas.

3. Warn her to advise you if any abnormal symptoms, such as headache, dizzy spells, swelled feet, etc., which might point to albuminuria or other dangers.

4. Tell her to have on hand, as soon as the first symptoms of labor begin, or before, if possible, two or three gallons of sterilized water (either boiled or distilled) in a sterilized boiler or pitcher, properly covered from the dust. This must not be cooled by adding cold, unsterilized water—a thing that unskilled attendants will be very apt to do unless you watch them. Even the baths that a patient takes before or after confinement should be in sterilized water, or, at least, aseptic water, and since many cities take their water supply from streams into which their sewage is emptied this is difficult to do unless the infected water be boiled.

5. All water used in the lying-in room must be sterilized. Also remember that your hands or anything else can be washed much cleaner in a stream that is poured from a pitcher, than if they are dipped into a basin containing the dirty water in which they have been washed, even though no discoloration can be seen in the water.

6. Everything to be used about the patient and bed in the way of clothing, etc., must be washed, boiled, and ironed, wrapped up from the dust in a paper and put away to be ready for use when the time comes. (The conditions present, and the antiseptic preparations, are essentially the same as you would expect to have in a surgical operation.)

7. She must have at least one dozen aseptic pieces of muslin, about fifteen inches square, boiled, washed, and ironed (an old sheet torn up will do), wrapped up in paper and put away to be used for wiping away the discharges, for wash rags, napkins, etc.

8. One large pad, about one yard and a half square, made of cheese-cloth, that has been boiled in water containing a small quantity of soda, and stuffed with new cotton, or, what is better, absorbent cotton. If ordinary cotton is used, it will have to be baked for an hour, to secure sterilization.

About a pound and a half of cotton will be enough, although two pounds would not be too much. This is to place under the patient during confinement, first, second and third stages; and must be removed soon after the first stage,to be replaced by a lighter one, also sterilized. Everything, of course, if the least bit soiled, must be removed from the patient, bed and child, promptly, lest culture fields be formed for germs.

9. One sheet of impervious cloth, about a yard and a half square, to be put next to the mattress for its protection.

10. One maternity binder, about eighteen inches wide and long enough to go around the patient, sterilized.

11. One piece of sterilized soap, hydronapthol or carbolized.

12. One new sterilized syringe, "Household No. 3" or "Fountain" will do.

13. Two-ounce box of antiseptic cosmoline or sweet oil.

14. One skein of sterilized silk floss.

Movable Kidney with Special Reference to its Influence on the Nervous System.

Suckling, in the Edinburgh Medical Journal, tells how to diagnosticate a movable kidney. He says it can only be made by palpation of the abdomen. The abdomen should be uncovered and the patient lying down. To feel the right kidney, the right hand should be placed on the abdomen, the thumb being on the last rib at the back and fingers in front below the costal margin. The kidney may be felt with slight pressure of the fingers to be down, but, if not, when the patient draws a deep breath, the kidney will slip into the fingers and can be slipped back easily. A common mistake is to palpate the abdomen with the flat of the hand; this simply pushes the kidney in front of the hand. The best way is to get the kidney in between the thumb and fingers, and not to press too heavily. It is necessary, before concluding that the kidney is not movable, to examine the patient sitting or standing. In these two positions the patient should lean forward and try to relax the muscles. In examining the left kidney, the left arm should be placed around the body, the physician standing on the right side of the patient, the fingers being placed under the last rib; the right hand should be placed under the left costal margin. On drawing the breath or on sitting or standing, if the kidney be movable, it will be felt between the fingers and can be made to slide up in a most characteristic way. The left kidney rarely falls to the same degree as the right. The right kidney frequently falls into the iliac fossa and even into the pelvis, but the author has never seen a case where the left fell below the umbilicus. It is remarkable that the left kidney feels much smaller than the right.

Significance of Mouth-Breathing.

At the recent meeting of the Medical Society of the State of New York Dr. Clarence C. Rice, of New York, read a paper on The Importance of Early Examination and Treatment of Catarrhal Mouth-Breathing in the Public Schools (Gaillard's Medical Journal, April, 1899). Ninety per cent. of the class of cases termed "mouth-breathers" in children are not simple ailments of catarrhal disease of the nose, but are evidences of obstruction which prevents nasal respiration. This obstruction is largely due to the presence of enlarged tonsils. It is impossible for children to clear their nostrils by blowing, for the post-nasal space is completely blocked. Most authorities do not recognize the fact that 90% of mouth-breathing occur in children as a result of this cause. Small hypertrophies in this situation produce a chronic rhinitis and a general catarrhal condition. Enlargement of the post-nasal tonsil is often a very important factor. To diagnose this the finger is a very unreliable guide unless the physician has made many such examinations. The doctor makes a diagnosis with the post-nasal curette if he cannot use the mirror, this being often impossible in fractious children. With the curette the vault is found to be slippery as glass or polished wood; no tissue can be taken away; if there is a soft, spongy tonsil it can be pulled down with the curette. It is much easier to use the curette than a finger in the small space in small children. In 9 to 10% of older children there is some enlargement of the posterior nasal tonsil, frequently small but often of most importance. It is present in 60% of all deaf mutes. The importance of these lies in the fact that mouth-breathing is neglected in school children. The presence of this condition in school children is a constant menace to their companions. Decomposing nasal secretions cause an acute rhinitis, etc., and every physician who treats many of these cases has difficulty in keeping his own nose in good condition; he must neutralize his own nasal passages.

Syphilis in Relation to Obstetrics.

Dr. Egbert H. Grandin read a paper on this subject at the New York Academy of Medicine, March 9, '99 (Med. News, April 8, '99). He insists on thorough inspection of the genitals before gynecological or obstetric examination is made. It seems almost providential that more doctors are not infected from a neglect of this rule. Examinations are sometimes almost completed in cases where inspection does not precede, before the doctor finds to his uter disgust and subsequent mental discomfort that his patient is undoubtedly syphilitic, and that great risk of infection has been run needlessly. As it is many a doctor in the city and in the country are suffering from syphilis acquired in this way. The necessity for the greatest precautions and of frequent reminders, for a certain familiarity with the danger begets forgetfulness, is evident.

Syphilis is the great cause of sterility whether relative or absolute, *i. e.*, sterility either with conception occurring but inevitably followed by abortion each time, or positive absence of conception. It would seem at times when the menstruation appears to recur regularly, that what really takes place at each or at least at certain menstrual periods is an abortion. The uterine mucosa, owing to syphilitic alterations in it, not having sufficient vitality to retain the ovum during the recurring monthly nervous impulse, proliferation, and fatty degeneration asserts itself. Habitual abortion is a misnomer if really considered to be a faulty habit of the organism as it is always syphilitic in origin.

Specific treatment in all cases of pregnancy where syphilis is known to exist in either parent is of the utmost importance. Active antisyphilitic treatment may even save an affected fetus, especially if the infection has come after the sixth month. No wet nurse can justifiably be allowed to nurse a child no matter how clean seemingly its personal bill of health if either parent has had syphilis. The mother should be encouraged to nurse her own child especially in these cases of lowered vitality.

Syphilis constitutes the great menace to households, and while the speaker was not Utopian in his hopes for improvement in present conditions from legal enactment he is sincerely of the opinion that legal regulation will yet have to be appealed to to prevent the spread of specific disease. Legislation is much more needed in this matter than for tuberculosis which is at present attracting so much attention. Certain States, as Texas and Massachusetts, already have laws against syphilis. A notable attempt was made recently in a western State to secure proper certification of the health of people before marriage. This may yet be considered as Quixotism, but some such legal regulation will surely come in the not distant future.

It is absurd to quarantine as we do against other and much less dangerous diseases and allow syphilis to spread absolutely without let or hindrance. It is a strange inconsistency due to certain mistaken notions of modesty and so-called propriety that whenever sexual questions assert themselves they are simply ignored. But this state of affairs cannot and will not be allowed to continue much longer without a serious attempt to solve the serious questions involved.

Tubercular Tonsils and Adenoids as the Etiology of Enlarged Cervical Lymph Glands.

One of the most interesting and difficult problems for specialists in children's diseases, (and as some one has well said this is the specialty of the general practitioner,) has been the etiology of enlarged cervical glands, or cervical lymphadenitis as our ultra-scientific friends like to call it. The tonsils have long been suspected as one of the points of entrance for the infection. The review of the recent literature of the subject in "Progressive Medicine," the new quarterly digest of progress in medicine, edited by Professor Hare,* shows that not only has the role of the tonsils in this matter been clear, but that it now seems certain from the investigation by a number of observers, that the adenoid and faucial tonsillar tissues at the upper part of the pharynx are quite often the seat of chronic tuberculous processes.

Prof. Dieulafoy, the distinguished French clinician of the Hotel Dieu, Paris, could demonstrate the presence of tuberculous tissue histologically in excised adenoids in only about six per cent. of the cases, but the much more delicate biological test of injecting portions of the excised tissues into guinea pigs gave positive results by the death of the animals from tuberculosis in 20% of the cases. These biological results, Dieulafoy considers as suggesting the true conclusions to be drawn. A number of other observers confirm these results, and it adds to the weight of the confirmation to know that there have been no national lines in the matter. Investigations in England,

*"Progressive Medicine," a Quarterly Digest of New Methods, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by H. A. Hare, M. D. Vol. 1, No. 1, March, 1899. Lea Brothers & Co., Philadelphia.

in various parts of Germany, in Russia, and in Austria, have come to practically the same conclusions as to the frequency of tubercle in these tissues.

How important these observations are for prophylaxis is evident at once. We have long known that when these tonsillar adenoid tissues were enlarged they should not, for certain physical and mechanical obstructive rensons, be allowed to remain, but there is now added the realization of the danger that tissues of such low vital resistance to the invasion of bacteria may frequently, owing to the presence of an abundant pathogenic flora in the mouth, become the ports of entrance for serious disease.

These considerations will better enable us to convince parents, too, of the necessity for the removal of these enlargements before they have become infected, or at least before they have passed the infection on along the lymph paths. The whole of this subject is in the line of the best advance in present-day medicine, and is especially important because of its intimate connection with prophylaxis in early years, of tubercular processes, against which until now, our hands have been practically tied.

Urine Examinations in Insanity.

Dr. Edwin G. Klein (N. Y. Medical Journal, March 18, 1899,) has examined the urine of 208 cases of insanity. He says:

The average total amount of urine was, for males, 1125 c.c., for females, 1020 c.c.; average specific gravity, 1019, minimum, 1005, maximum, 1035. Urea varied with specific gravity, but was on the whole rather decreased. Phosphates were decreased in the excited patients, but the reverse in the depressed cases. Oxalates were in excess in six of the depressed cases, and in two, treatment directed to this symptom was followed by complete or approximate recovery. Chloride were increased after epileptic attacks in three out of four cases examined, also in one case of paresis after a convulsive attack. Uric acid in excess was common in dementia and was observed several times in paresis. Urates, when in excess, were generally associated with dyspepsia. Peptone was found twice in twelve cases of paresis, the tests, however, were not implicitly trusted, and it might possibly have been more frequent. Albumin was found four times only in 202 cases, in one of these only transient. Yet in the majority of autopsies of the insane, chronic kidney disease is found to exist. Dr. Klein thinks that if often enough sought for albumin would be more generally found. In six cases glucose was discovered, not as large a proportion as others have reported, but the tests seem to have been thorough. The report is only a preliminary one, and the author hopes in the future to investigate many of the points more thoroughly. It is, however, of interest as far as it goes.

Otitis.

Dr. Hugh Blake Williams (The Alkaloidal Clinic, January, 1899.)

The more I see of chronic suppurative inflammation of the ear, the more convinced do I become that the element of chronicity is due to lack of thoroughness in treatment. The method of procedure mapped out below will not succeed in cases where necrosis has occurred, but in all others it will reduce the duration of treatment from months and weeks to days.

The patient is placed upon the side with the affected ear up. The concha is filled with Marchand's Hydrozone, which is allowed to remain until it becomes heated by contact with the skin, when, by tilting the auricle, the fluid is poured gently into the external canal. The froth resulting from the effervescence is removed with absorbent cotton from time to time and more Hydrozone added. This is kept up until *all* bubbling ceases. The patient will hear the noise even after the effervescence ceases to be visible to the eye.

Closing the external canal by gentle pressure upon the tragus forces the fluid well into the middle ear, and in some instances will carry it through the Eustachian tube into the throat. When effervescence has ceased the canal should be dried with absorbent cotton twisted on a probe and a small amount of pulverized boracic acid insufflated.

The time necessary for the thorough cleansing of a suppurating ear will vary from a few minutes to above an hour, but if done with the proper care it does not have to be repeated in many cases. However, the patient should be seen daily and the Hydrozone used until the desired result is obtained.

Care is necessary in opening the bottle for the first time, as bits of glass may fly. Wrap a cloth about the cork and twist it out by pulling on each side successively.

In children and some adults the Hydrozone causes pain, which can be obviated by previously instilling a few drops of a warm solution of cocaine hydrochloride. In this note it has been the intention to treat suppuration of the ear rather as a symptom and from the standpoint of the general practitioner.

The Non-Medicinal Treatment of Habitual Constipation.

Lockwood (Medical Record, Nov., 1898). The use of drugs is prejudicial, as it inflicts serious damage to the gastro-intestinal tract by the lessening of digestive and motor powers of the stomach and the irritation of the intestinal mucous membrane. The contraindications to the use of saline and vegetable cathartics are: (1) All the conditions characterized by diminished secretory power; (2) all conditions of impaired muscular power of the stomach and intestine; (3) all conditions of inflammation of the stomach or intestines; and (4) in children, owing to the proneness in them to inflammation of the intestinal mucosa. Enemas facilitate the absorption of ptomaines by the liquefaction of the feces. The articles of diet most useful are coarse vegetables, such as spinach, turnips, and sprouts (these are best taken in the form of purée); coarse breads one day old, and cereals. Sugars are also useful, but should be taken in the form of honey or lactose. Buttermilk or Kumyss, 3 glasses a day; fats in the form of butter, one-eighth to one-half pound daily, or cod-liver oil, and organic acids are useful as peristaltic excitors. Another excellent remedy is made up of 2 parts of prunes and one of figs. Raw fruit is not desirable. Huckleberries and cranberries should be especially avoided. In general, the diet should be dry. Exercise, massage, abdominal gymnastics, electricity, abdominal belt and hydrotherapy are all very important adjuvants to the treatment. Massage is contraindicated in all inflammatory and spastic conditions. Sedative remedies are indicated in intestinal spasm, a quite frequent condition, caused primarily by hyperacidity. The author has also found Kussmaul's oil irrigations very beneficial.

Commencement Exercises.

The tenth Commencement exercises of the Chattanooga Medical College took place at the Auditorium, in Chattanooga, Tenn., March 21st, 1899. The spacious structure, with a seating capacity for five thousand persons, was well filled with a representative audience of citizens, and the affair was an entertainment of high merit. There was instrumental music by Cadek's Orchestra, and charming vocal numbers by local musicians of note. Dean Cobleigh, after prayer by Rev. A. J. Fristoe, of the Central Baptist church, presided and opened the exercises with appropriate introductory remarks concerning the college history and its present prosperous condition. Hon. C. D. Mitchell, President of the Erlanger Hospital Board, followed with the main address of the evening. Dr. Jo. J. Harrison then delivered the class valedictory, and Professor Holtzclaw addressed the class on behalf of the faculty. Thirty-one graduates were called, by name, by the Secretary—Prof. Rathmall—and advanced to the front of the stage attired in Oxford caps and gowns, presenting a very striking and pleasant appearance. President Rice, of Grant University—of which the college is the medical department—then conferred the "degrees" with a brief "talk" to the recipients. Honors were bestowed as follows: Faculty gold medal to the Valedictorian, Dr. Jo. J. Harrison; a case of surgical instruments to Dr. E. M. Russell, this being the second prize; a medical book—third prize—to Dr. O. G. Hughes; and honorable mention was made of Drs. J. B. Hughes, R. O. Kibler, H. P. Larimore, and C. S. Wilkerson, the four students grading next to the prize men in general proficiency.

The Dean stated that the session just closed had been the most prosperous in the college history, that the evening's exercises marked the close of the first decade of such history, that nearly two hundred students had been enrolled in the college class during the past term, and that, with the completion of the new city hospital which had just been accomplished, the general outlook of the institution was particularly promising.

Sleep in the Treatment of Disease.

Wm. Evart (British Medical Journal): Sleep has two offices, both fulfilled in the long sleep of the night, which it is our usual endeavor to secure for our patients, namely, that of favoring the slow changes of repair, and that of interrupting consciousness or uncoupling the chain of neurons, or by relaxing protoplasmic tension or tone. This relief of tension is, it would seem, the only office performed by the shorter spells of sleep, and therefore the two forms of sleep suggest two therapeutic objects. The night's sleep which comes without any drugs may need to be bettered, and in improving the quality of spontaneous sleep our help is often of value. It might also need to be prolonged.

The symptematic prolongation of sleep for the cure of disease is one of our opportunities hitherto little used. In chorea, sleep entirely subdues the muscular agitation, and this observation has led to the attempt to arrest the disease by prolonged sleep for considerable periods. A complication arises in connection with alimentation which in this disease, as in most other nervous troubles, is of primary importance. Partly for this

reason, and because more than rest may be needed for a cure, the results hitherto reported have not sufficiently recommended the method.

Prolonged narcosis has also been suggested in excessive wear and tear of the nervous system; and in various nervous affections, including the mental, its renewed trial, combined with suitable methods of feeding, lead to encouraging results.

Best suited, perhaps, to our every-day needs is a systematic resort to the shorter sleep. Like the light installments of food which restores the lost function of appetite and digestion, short sleep in the day may be essential to the cure of nocturnal insomnia. Our growing wealth in hypnotics warrants a hope that a suitable agent may yet be found which in that direction would minister to the health of the invalid, and might command the luxury of sleep at any opportune time for the convenience of the worker.

Body rest as a systematic therapeutic agent has long found its place in our treatment for patients whom weakness alone, in the absence of medical advice, would not have been compelled to take to their bed. To that class belong the frail women in whom the debility of anemia, of dyspepsia, and of over-fatigue develop symptoms often mistaken for hysteria. Rest in bed is their first need. In the treatment of chlorosis this is now recognized as the essential element for a rapid recovery. Its methodical employment forms an essential part of the Weir Mitchell plan. But its most striking instance is that of the open-air rest for phthisis, which within quite recent years has largely replaced at foreign sanatoria the previous method by muscular exercise.

The Toxæmic Factor in Diabetes Mellitus.

McCaskey (Medicine, January, 1899, p. 1). All cases of persistent glycosuria are cases of diabetes mellitus of varying grade. "Diabetes mellitus is a disease of diverse origin, but the unity of the clinical picture being for the most part dependent upon the glycæmia and the glycosuria, which are mere incidents, although dominating factors of the disease. Phloridzin-diabetes is not essentially different from clinical diabetes; it renders plausible the assumption of a chemical factor, either as a primary or as an important secondary element in the clinical type of the disease. Normal sugar transformation in the blood, failure of which is responsible for the glycæmia and the glycosuria, results from the presence in the blood of a chemical product, derived in man principally, if not exclusively, from the pancreas and thrown directly into the blood from the pancreatic cells, without the intervention of a duct. The direct chemical antagonism of this substance by another is no more improbable than such an antagonism of a toxin by an antitoxin. It is probable, on both clinical and experimental grounds, that certain chemical poisons, for the most part of gastro-intestinal origin, but possibly also resulting from faulty tissue metabolism, or as a perverted internal secretion from glands not necessarily ductless, either directly or indirectly antagonize, in whole or in part, the sugar-destroying substance in the blood, thus giving rise to glycæmia and glycosuria, and thus in a certain group of cases either primarily causing or at least exaggerating the clinical phenomena of diabetes mellitus. If further investigation should corroborate the conclusions here provisionally set forth, it would be advisable hereafter to investigate the bacteriology of the stomach and the intestines in cases of diabetes mellitus; and if evidences of virulent bacterial, protozoan, or other parasitic growth are found, these conditions should be met by suitable treatment—not with the expectation of entirely supplanting dietetic treatment, but as an important auxiliary to the latter, possibly rendering its restrictions less severe, with less resulting impairment of nutrition.

Proposed Changes in the New York State Medical Examinations.

The following recommendations have been made to the regents by the board of medical examiners of New York State: "1. That as soon as practicable the subjects of examination be rearranged as follows: (*a*) Pathology and diagnosis, now grouped under one head, to be divided into: 1, pathology; 2, diagnosis. (*b*) Therapeutics, practice, and materia medica, now grouped under one head, to be divided into: 1, practice of medicine; 2, materia medica and therapeutics. (*c*) Anatomy and physiology, now grouped as two topics, to be united on one sheet, the number of questions in both topics not to exceed fifteen. (*d*) Chemistry and hygiene, now grouped as two topics, to be united on one sheet, the number of questions not to exceed fifteen. 2. That the State medical schools be requested to furnish for the use of the question committee thirty questions on each branch taught by each member of their respective faculties. 3. That with his application each candidate submit an unmounted photograph to insure identification."—*Medical Record, April 1, 1899.*

Demonstrating the Malarial Parasite in the Blood.

Dr. C. E. Simon (Md. Med. Journal). Prepare blood films in the usual way and let dry in the air; then fix for a few minutes in absolute alcohol. After drying, the fixed blood films are exposed to the vapors of iodine for from ten to fifteen minutes. To this end some metallic iodine is placed in a small glass dish provided with a well-fitting cover, and the specimens, blood-side down upon little tripods of glass or a similar contrivance, so as not to come in direct contact with the iodine. When the specimens present a well-marked yellow color they are removed, carefully dusted off with a camel-hair brush and mounted in a drop of syrup of levulose. The color of the red blood corpuscles is now very like that of the fresh blood somewhat intensified and the malarial organisms appear as in fresh specimens. If the finger has been carefully cleansed and clean glasses have been used, no foreign material will be present to interfere with the examination. Unfortunately the color of the red corpuscles fades after twelve to twenty-four hours, so that the preparations cannot be preserved. For teaching purposes the method will be found very convenient at times when fresh specimens of malarial blood connot be readily procured.

Observations on the Treatment of Hay Fever.

Dr. Beman Douglas (Med. Record, April 1st, '99,) read a paper at the New York Academy of Medicine on this subject. He said that the disorder seemed to have been far more severe last summer than in previous years. He had seen all the well-marked symptoms of an attack of hay fever develop within the space of two minutes. The general symptoms were often overlooked, but they were nevertheless very important, in his opinion, and indicated a deeper seat for the affection than simply the local process in the nose. The characteristics usually began about August 20th, in this climate, and reached their maximum in two weeks. There were two grand divisions of these cases, viz., (1) Those having nasal lesions, and (2) those free from such lesions. There was but little difference in the course and duration of the disease in these two forms, but the cases presenting no nasal lesions were decidedly in the minority. It was difficult indeed to understand why some people suffering from nasal obstruction were not in the least affected by dust irritation or pollen of flowers, while others, with no discoverable nasal defects, could not tolerate such irritation at all. It would seem probable that some cases of hay fever resulted from the action of outside irritants on nerve filaments rendered hypersensitive by vicarious elimination. It was not difficult to believe that the removal of obvious nasal lesions would afford some relief in hay-fever patients, but it should not be forgotten that even then a hypersensitive condition still remained and demanded treatment.

Malaria and Mosquitoes.

Dr. Amico Bignami illustrates, according to Treatment, March 9,'99, how he obtained experimental proof of the connection of mosquitoes with malaria. An individual who had never had malarial fever, sleeping in a healthy place where no one had ever previously taken fever, sickened with malaria of a grave type after being bitten by certain species of the mosquito brought in the aduit state from some distant locality of highly malarious character. Everything points to the conclusion that inoculation is the only mode by which infection is acquired, since air and water as carriers of infection may be excluded, and because arguments based on analogy all tend in the same direction. It appears that it is only certain species of mosquito which act as carriers of infection, for Professor Grassi, in the study which he made during last summer of the distribution of mosquitoes in malarious and non-malarious localities, came to the conclusion that in malarious places, in addition to the species which are found in non-malarious districts, there are others which are absolutely unknown in these latter. In non-malarious districts the predominating species is the *Culex pipiens*; in malarious places, on the other hand, are found the *Anopheles claviger* (*maculipennis*), the *Culex penicillaris*, and other species, which therefore appear to have an intimate relation with malaria. One of these species, apparently not yet described, Grassi found at Maccares, and he named it *Culex malariæ*.

Lung Gymnastics.

Direct gymnastics for the lungs, to increase their capacity and elasticity, are almost a safeguard against consumption if taken in time.

Dr. Otis advises people with weak lungs to stand erect in a well ventilated room, place the hands on the hips and take long, deep, slow breaths, varying the rythms,and at times taking short, jerky breaths for variety. The breath should be drawn only through the nose.

Better yet, combine the breathing exerci-

ses with the setting up drill or other arm exercises. Dr. Otis gives these exercises, to which others might be added:

1. Slowly raise the arms from the sides until they meet above the head, breathing deeply. Breathe out while slowly lowering.

2. Raise the arms in front; carry them as far back as possible; then down. Breathe as before.

3. Slowly rise upon the toes, breathing deeply.

4. Extend the arms in front; carry one leg back as far as possible.

5. Lie on the back; raise the arms backward and over the head, while breathing deeply.

People with plenty of lung capacity can stand even bad air without suffering.

It is well known that women whose lung capacity is interfered with by corsets are much more apt to faint in close, ill-ventilated rooms than men.

The Pathology of Diphtherial Paralysis.

Dr. Batton (British Medical Journal. 1898. No. 1977).

Although various views have been held with regard to the pathology of diphtherial paralysis, it is at the present time generally recognized that the lesion most commonly found is a parenchymatous degeneration of the myelin sheath of the nerves, and Martin has shown that this condition affects primarily the finer nerve branches. More recently the work of Mouravjeff would tend to show that the primary alteration occurs in the cells of the anterior horn, and this was demonstrated by Nissl's method—a method which Martin did not use. The same condition had been previously described by Crocq, though he describes the primary condition as a myelitis.

In the experiments of Mouravjeff the animals which had been allowed to live for the longest time after infection showed well-marked changes in the peripheral nerves, although no change could be demstrated in the granules of the nerve cells. Some of the cells may, however, have undergone atrophy. In the present series of cases the cells, not only of the anterior horn, but also of the posterior root ganglia, appeared normal. It may, however, be that the cells in these cases had had time to recover.

With regard to the affection of the posterior roots, Meyer, in 1881, showed that they were degenerated, and also that this degeneration existed on both sides of the spinal ganglion. This has been noted again, more recently by Preiz, Crocq, and Mouravjeff, and among others by Bikeles, who describes the occurrence of masses of fat globules in the posterior root at its entrance into the spinal cord; this, however, is a normal condition certainly in children, and probably to a lesser extent in adults, and hence localized granules of fat in this region should not be regarded as evidence of degeneration.

The cranial nerves have been found affected by Meyers, Bristowe, and others; Crocq, however, failed experimentally to find any degeneration. The nerves described as being affected are the third, fourth, fifth, sixth, seventh, eighth (Moos), ninth, tenth, eleventh, twelfth.

In conclusion, then, i is probable that the dominant lesion in diphtherial paralysis is a parenchymatous degeneration of the myelin sheath of the nerves, and that this degeneration affects both motor and sensory fibres alike.

Nephritis of Malarial Origin.

W. S. Thayer, (American Journal of Medical Science). It is safe to assume that any infection, the toxicity of which is sufficient to produce as large a percentage of serious acute nephritides as malarial fever, must play a certain part in the etiology of chronic renal changes. Such changes are due to circulating toxic substances produced either directly, by the growth of the infectious organism, as in diphtheria, or set free from the bodies of the dead bacteria, as in typhoid fever, or resulting secondarily from the action of such substances on the fluids and tissues of the body.

The suprising frequency of acute nephritis in our cases of malarial fever would appear to be an indication of the extreme toxicity of the circulating poisons present, evidence of the existence of which is shown in the grave changes noted in the spleen, liver and brain. Conclusions:

1. Albuminuria is a frequent occurrence in malarial fevers.

2. It is considerably more frequent in æstivo-autumnal infections than in other forms, as 58.3 per cent. is to 38.6 per cent.

3. Acute nephritis is a not unusual complication of malarial fever.

4. The frequency of acute nephritis in æstivo-autumnal fever is much greater than in the regularly intermittent fevers.

5. The frequency of albuminuria and nephritis in malarial fever, while somewhat below that observed in the more severe acute infections, such as typhoid fever, scarlet fever, and diphtheria, is yet considerable.

6. There is reason to believe that malarial infection, especially in the more tropical countries, may play an appreciable part in the etiology of chronic renal disease.

Drug and Food Diseases.

Dr. William Ewart (British Med. Journal, December 10, 1898):

"There is a source of nervous ailments entirely special to this age, and the unexpected outcome of our nineteenth century chemistry and advertising. Intemperance in drugs is becoming more common, and it may possibly outstrip the abuse of alcohol in its evil results. The manufacture of new chemical products is supplying the public with endless carbon derivatives of high molecular power, and of imperfectly known physiological action. Fortunately, many advertised medicines are harmless, but their prolonged use is detrimental if only by delaying the treatment required by the original affection. Others are most dangerous, and their continued indulgence leads to confirmed neurosis or hopeless neurasthenia, and it thus comes to pass that as the therapeutic activity of the profession tends to abolish disease, that of the public is manufacturing it. While the increasing purity of natural foods has reduced our mortality, modern ingenuity has been the unintended means of occasionally supplying poison in food. Fortunately, ptomain poisoning is an unusual accident. A much more serious and wide spread evil has been the undiscriminating substitution by mothers of condensed milk and manufactured foods for the fresh supply of milk. This neglect of fresh milk and the untutored administration of artificial foods, even of the best kind, without due regard to proportion and to suitability, have been disastrous. To this cause may be attributed the fact that, in spite of modern hygiene, infantile mortality from diarrhœa and marasmus has shown no adequate decrease, and sometimes an increase over that noted before these modern inventions.

Massage of the Abdomen.

Reed (Medical News) recommends massage in the following conditions:

Chronic gastritis in all its forms, excepting those accompanied by hyperchlorhydia.

Anacidity or subacidity, except when dependent upon acute gastritis or carcinoma.

Gastroectasia, not dependent on cancer.

Atonic conditions of the stomach walls, whether progressed to the stage of dilatation or not.

Displacements of the various abdominal organs, including (a) gastroptosis; (b) nephroptosis, except in cases where the displaced kidney has become excessively tender on pressure; (c) enteroptosis.

Chronic intestinal catarrh, not complicated with deep ulceration.

Dilatation of the intestines.

Constipation from unknown causes. In many such cases massage succeeds.

In a group of symptoms which comprise especially tenderness over a region three or four inches in diameter, including the umbilicus as its center, and a marked pulsation of the abdominal aorta in the entire epigastric region.

These symptoms have been assumed to denote congestion of the solar plexus. They are often met with in practice, and may be the result of auto-infection from the gastro-intestinal tract. They are usually benefited by gentle kneading of the abdomen in connection with careful attention to diet. The following are the principal contra-indications for massage of the abdomen: Ulceration in any part of the stomach or intestines; cancer of any of the abdominal organs; acute inflammation in any part of the gastro-intestinal tract; hyperchlorhydria; prolapsed kidneys which are acutely sensitive to palpation; aneurism of any of the abdominal or thoracic arteries; during the menstrual period, when the flow is excessive, or when there is a tendency to menorrhagia. In fatty degeneration or marked dilatation of the heart and advanced phthisis, especially with a tendency to hemoptysis, abdominal massage should be practiced—if at all—with much care and gentleness.

Confederate Veterans' Reunion.

Charleston, S. C., May 10-13, 1899.

On account of the Confederate Veterans' Reunion, the Seaboard Air Line will sell tickets to Charleston and return at very low rates, based on one cent per mile, traveled. Tickets on sale May 8th, 9th and 10th, good until May 21st.

For information in regard to rates, schedules, &c., apply to Ticket Agents or address

L. S. Allen, Gen'l Pass'r Agent,
Portsmouth, Va.

In Cholera Infantum.

The Imperial Granum Food has proved of priceless value being often the only nutriment found suitable and capable of being retained. Thousands of lives have apparently been saved by its use, and it has seemed to possess not only nutritive but medicinal value, so immediately soothing and quieting was its effect. This shows the vital importance of such a nutriment, one that is pure, natural and unsweetened and that can be easily and quickly assimilated even when the digestive powers are impaired by disease.

Syphilis of the Brain and Spinal Cord.

This was the subject of a paper read at a recent meeting of New York Academy of Medicine by Dr. Sachs.

Up to a comparatively short time since, the diagnosis was made by a process of exclusion, and it was often incorrect. As to the frequency of syphilis of the central nervous system, it had been asserted that this occurred in from 15 to 25 out of every thousand cases of syphilitic disease, exclusive of those in which tubes or paresis resulted. The statement was often seen that syphilitic nervous disease was on the increase, but perhaps this was due to the fact, on which neurologists were apt to pride themselves, that our knowledge was greater than formerly. Some years ago he had been taken to task for the statement that the nervous system was more apt to be affected in cases characterized by mild initial disease than in those in which the latter was more severe. Of late, however, many observers had agreed as to the correctness of this view. It was true that many of the cases were improperly treated in the early stages, but still many others were met with which had received appropriate treatment. It was now well known that serious lesions of the nervous system might occur simultaneously with the rash of secondary syphilis.

The pathological characters of syphilitic disease of the nervous system were not unlike those met with in other parts of the body. The formation of gummata was the most common manifestation, and at an early period these growths began to undergo a retrograde process. A solitary gumma was rarely observed. Not only were the capillary blood-vessels concerned in syphilitic lesions, but the larger vessels were also affected. Occlusion of the vessels was liable to result, but this was not always permanent. It was to be regretted, for diagnostic purposes, that the bacillus of syphilis had not as yet been differentiated with sufficient clearness. Among the characteristics of syphilitic disease was the multiplicity of symptoms, with alternate exacerbations and retrogressions. The fact was also to be noted that there was no other disease which so frequently gave rise to paresis rather than paralysis. While there was a vast variety of symptoms, none of them was pathognomonic. The question of localization of the lesion had been much overdone in comparison with the more important matter of its character. The multiplicity of lesion met with need not imply that all the lesions coexisted. An important point in the diagnosis of syphilis of the nervous system was the fact that in this disease symptoms occurred which were not apt to be met with in individuals in adolescence or in middle life.

The most valuable guide at our command, however, is the condition of the pupils. The pupils of the subjects of syphilis presented at least four characteristic peculiarities. These are:

1. Irregularity in contraction.
2. Unequal responsiveness, one responding readily to light and the other not.
3. Immobility; presenting a marked contrast to the Argyll-Robertson pupil commonly met with in ordinary tabes.
4. Marked departure from the circular form, in cases where there had been no previous iritis.

It had been often said that the history of syphilis was almost always "written on the skin," but if we suspected a person of syphilis on whose skin such history was not too clearly written, we would receive most valuable assistance from a careful study of the pupils. At the present day we should be able to make the diagnosis of syphilitic disease without having to resort to a course of specific treatment. Chronic headache, particularly vertigo, is in many cases the only sign of cerebral syphilis. The occurrence of this should therefore always excite suspicion. He mentioned the case of a physician who for a considerable time had suffered from repeated attacks of vertigo, without appreciable cause, and who had traveled extensively and consulted many eminent members of the profession without securing relief. The probability that he was suffering from syphilitic brain trouble occurred to him, and the affection entirely disappeared under syphilitic treatment. Apoplexy in syphilitics, if the symptoms were those characteristic of thrombosis, was to be attributed to endarteritis. In cases of double optic neuritis it is well to bear in mind the possibility of the existence of syphilis before giving a positively fatal prognosis.

He referred to some of the anatomical peculiarities of the cord, especially as regards its vascular supply, and said that in disease of the posterior columns it was very important to differentiate between true tabes and syphilitic pseudo-tabes. Here the condition of the pupils would offer valuable assistance, for if the latter affection was present we would have immobility of the pupils in contradistinction to the Argyll-Robertson pupil. He was inclined to the opinion that specific endarteritis has much to do with the early stages of posterior spinal sclerosis. In all lesions of the nervous system disease of the blood-vessels was the first stage of development. Whether the disease

affected the cervical, dorsal or lumbar portion of the cord, the eye symptoms would be the same.

The Treatment of Harelip and Cleft Palate.

This much-discussed topic continues to be the subject of a good deal of doubt in many minds as to when and how to operate for the various conditions that present themselves. Many of the procedures necessary are entirely within the range of the general practitioner, but there always remains a feeling of hesitation as to the methods most advisable to employ, and the most suitable time for operation. Towards solving such doubts an authoritative review of the recent literature on the subject, and conclusive statements as to what seems best in the therapeutic suggestions that have been recently offered by various writers will be of the greatest value to the busy practitioner.

Such a review of the treatment of Harelip and Cleft Palate is given by Dr. J. Chalmers DeCosta, in "Progressive Medicine,"* the new Quarterly Review of Advances in Medicine, of which Professor Hare is the editor. From it we gather that the tendency is more and more towards early operation. The third or fourth month used to be considered the earliest suitable time to operate. Murray now counsels operation in the fourth week; Mumford and Heath think it should be undertaken not later than from the sixth to the eighth week. Where cleft palate exists it is not operated upon so early. The harelip is operated upon alone, and the persistent pressure made by the closed lip helps to lesson the gap in the growing bone. The operation on the cleft palate is put off for awhile, but this, too, not nearly so long as it used to be. If the closure of the defect is delayed until the child has learned to talk, the peculiarities of speech, especially its offensive nasal character, will never be corrected. The authorities are agreed, then, that a cleft in the soft palate should be closed about the sixth month, and in the hard palate during the second year.

The practical suggestions collected from the recent literature of the subject by Dr. DeCosta are very valuable to the ordinary practitioner. Space will permit us to give but a few of them. The use of the knife in operation rather than the scissors, because the latter crushes tissue more, leaving its vitality impaired, especially at the edges where this is so important for subsequent union; the avoidance of pins or heavy sutures in securing proper apposition after the operation is advised, though these are faults of technique in this matter that we fear have been so ground into the present generation by text-book and teacher that failures of union due to these crude early methods will still continue to be frequent. The suggestion by Mumford as to anchoring the nares with shotted wire will remove a very common cause of failure due to the child's inevitable tendency to "turn up its nose" at and after the proceedings.

In double harelip it is advised to remove the intermaxillary bone by sub-periosteal operation a week before the operation on the lip. If left it is liable to undergo necrosis. Its removal leads to some flattening, but this will not be great if the bone be removed by sub-periosteal operation, and if but one side of the harelip be operated upon at a time. Among the directions for the operation for cleft of the hard palate, we note these pre-operative measures of precaution from Owen, which are sometimes forgotten, but of which the practical value it is easy to see: never to operate unless the child is in the best possible health; remove carious teeth, adenoids and enlarged tonsils before operating, and operate whenever possible in fine weather, so that the patient can get out of doors soon afterwards. The neglect to remove such ready sources of infection as carious teeth and those harborers of microbes, the irresistive tissues of adenoids and enlarged tonsils, is very probably the source of a good many of the failures in uranoplastic osteo resection.

*"Progressive Medicine," a Quarterly Digest of New Methods. Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by H. A. Hare, M. D. Vol. 1, No. 1, March, 1899. Lea Brothers & Co., Philadelphia.

A Hypnotic for Confirmed Insomnia.

The following taken from the International Medical Annual and Practitioner's Index for 1898, with reference to trional, will prove of interest: Dr. J. Arthur Browne speaks in the highest terms of the value of this drug as a hypnotic. He says: "I have given it to produce sleep in cases of pneumonia, bronchitis, alcoholism with delirium, insomnia from mental worry, and other forms of nervous insomnia, and I have invariably found it satisfactory. It is rapid in its action, and it has these advantages over sulfonal or the bromides, that it is certain and does not produce the disagreeable sequalæ of sleepiness, lassitude, and depression on the day following its exhibition. Nor have I observed any derangement of the digestive system in connection with its administration. An initial dose, 20 or 24 grains, may usually be reduced to 15 grains or less, and in this way trional becomes invaluable for breaking a pernicious habit of

sleeplessness, where a few good refreshing nights may restore the normal habit of sleep. Even in cases of confirmed insomnia, which have been treated unsuccessfully by chloral, paradehyde, and the whole gamut of hypnotics, each drug having in turn to be increased in dose until it finally loses all power or becomes dangerous, trional in my hands has afforded marked relief without apparently any ill-effect, and has given tranquil refreshing sleep without any increase of the initial dose."

Ruhemann has employed trional without inconvenience in all doses, to the extent that as much as nearly 3,500 grains have been given during a period of six months. He has also used it in the treatment of children with good effect. The doses to be given to children are as follows: for infants of one month to one year, 3 to 5 grains; one to two years, 6 to 12 grains: two to six years, 12 to 20 grains; six to ten years, 20 to 25 grains. He uses it with advantage in the treatment of chorea and conditions associated with cerebral excitement in childhood. In adults the dose as a maximum one is 30 grains. Should the patient be suffering from dyspepsia he advises the administration of trional by the rectum in milk in the dose of 20 grains. As a rule its influence under these circumstances is prompt, sleep coming on in from fifteen to thirty minutes and lasting from six to nine hours. Trional has no cumulative influence, and cardiac affections do not contra-indicate its administration.

Aseptic Midwifery.

Dr. Jardine read a paper on this subject at the Edinburgh meeting of the British Medical Association. He points out, says the "Hospital," that parturition may be said to be a physiological act, but among highly civilized women it is dangerously near a pathological one, and very little may turn the scale. In the vast majority of cases at the onset of labour the genital tract is perfectly aseptic; by this we do not mean that it is free from organisms; on the contrary, it is swarming with them, at least the vagina and lower part of the cervical canal, but these organisms are not only non-pathogenic but they are actually protective, preventing the pathogenic ones gaining a foothold by rendering the vaginal secretion acid. The vagina has within it a self-cleansing power. The cervical canal has a plug of mucus—the operculum — which shuts off as it were the uterine contents from the vagina. The different layers of this plug have been examined bacteriologically, and the upper or uterine layer has been found to be perfectly free from organisms. We therefore start with an aseptic uterus and genital tract; the discharges which come from within, the liquor amnii and blood will not in any way interfere with that condition, but tend rather to assist it by flushing out to a certain extent anything which may get into the lower part of the genital tract. Our whole aim is to conduct the labour so that at the end the tract will be as aseptic as when we began. The treatment during the puerperium must also aim at the same thing. He points out that the genital tract may be infected first and most frequently from the examining finger: secondly, from the use of septic instrument; thirdly, from aseptic fingers or instruments carrying in infection from the external parts of the patient or the surrounding clothing. The attendant's hands must be surgically clean, the external genitals must be thoroughly cleansed, and vaginal examinations must be as few as possible. As to douching in an ordinary case, it is unnecessary, and in fact as likely to do harm as good by removing the normal secretion from the vagina. He considers it necessary under the following conditions: (1) if there is any purulent or putrid discharge from the vagina such as from gonorrhœa or cancer of the cervix; (2) if any operation is to be performed when the hand or any instruments have to be introduced into the uterus. Post partum douching is not necessary in ordinary cases, and should not be done as a routine. Under the following conditions one should douche immediately after labor: (1) in post partum hemorrhage, then it should be given very hot; (2) if there has been any purulent discharge previous to labor; (3) if the fœtus has been putrid; (4) if the hands or instruments have been introduced into the uterus; (5) if the parts have been lacerated to any extent and if the labour has been a very prolonged one. During the puerperium douching is quite unnecessary unless the lochia become putrid and the temperature rises. The second stage of labour must not be allowed to drag on indefinitely. Dr. Jardine thinks two hours for the second stage in a multipara and three hours for a primipara is quite long enough; if no advance is then being made it is time to interfere. The third stage must be conducted very carefully to make sure that nothing is left behind in the uterus. As soon as the third stage is complete and the uterus remains firmly contracted all soiled things must be removed from the bed and the patient thoroughly washed with an antiseptic. During the puerperium no soiled things should be allowed to remain under the patient or in the room; the napkins

must be changed when soiled, and the soiled ones burnt. The external genitals washed frequently with a warm antiseptic. If a douch should become necessary perchloride of mercury 1-2,000, followed by stirilized water is the best.

Premature Baldness.

Someone said, not long ago, that the ideal symbol of faith was not the traditional maiden clinging to the Rock of Ages, but the bald-headed men confidently consulting the bald-headed specialist and faithfully looking for relief for his bald-headness. It is a very suggestive symbol of human limitations, but when hair follicles are gone it would take a special creative act to replace them and the hirsute appendage they furnish. The treatment of premature baldness, however, is not so hopeless if it is taken in time,and skin specialists are agreed that much can be done for the condition if properly treated by prophylaxis, and early attention. In these preliminary stages,and before the real beginning of the alopecia, properly so called, the cases come into the hands of the general practitioner. Too often he is prone to make little of them, or to consider that they are inevitably progessive anyhow, and so a deformity is allowed to supervene that is unslightly, and a cause of a great deal of annoyance to the patients.

Prophylaxis is especially important. Dr. Jackson, in his Manual of Skin Dieseases* insists on two things: the influence of heredity in these cases, and the aetiological importance of dandruff. Farthers and sons for generations may grow bald early, or the inherited peculiarity may have to be traced to the grand-parents or some collateral line. Not all the children in one family in which baldness is hereditary are bald, but it will manifest itself in two or three of the children. The necessity for prophylaxis in these cases in evident. *Hygiene of the Scalp* must begin at the very beginning of life and be continued persistently. Its details, as given by Dr. Jackson, are irksome, but most mothers whose sons are threatened with their father's early baldness, will be perfectly willing to take the additional trouble, and as far as the sons themselves, as soon as they come to the years of indiscretion (or vanity),which is generally considered to be about the age of fifteen, they can usually be depended on to take for themselves all necessary precautions to stave off the unwelcome parental inheritance.

As to dandruff, it constitutes, according to Dr. Jackson, the cause of 70% of the premature baldness that occurs. Not that everyone that has dandruff will become bald; experience is against that, but it is very often true that an error in the nutrition of the sebaceous glands causes sympathetic trophic disturbances in the hair follicles, and hair production ceases. In this class of cases early treatment is of the utmost importance. Lassar's method requires the taking of a good deal of trouble on the part of the patient,but it is deservedly popular because of its frequent success. In general, however, the cure of the condition causing the dandruff, which is now considered to be, in all cases, a form of eczema, seborrhoicum will stop the loss of hair. Persistence of treatment for months is necessary, but will nearly always be crowned with success if the condition was not too far advanced when treatment was begun. When there is absolute baldness, it is extremely doubtful if anything can make the hair grow.

*The Ready-Reference Hand-book of Skin Diseases, by Geo. Thomas Jackson, M. D. Third edition, just issued.—Lea Brothers & Co.

The Treatment of Chronic Bronchitis.

There is no more common affection encountered by the general practitioner, than chronic bronchitis. The affection is met in varying degrees of advancement, and the prognosis in some instances is as grave almost as phthisis.

Chronic bronchitis, we may observe, is necessarily a resultant affection, and the case which we are called upon to treat may be a mild bronchial inflammation which has existed only a few months and which carries in its train but little annoyance to the patient, or it will present histories, that will carry us back in our search for the cause to exposure in an attack of the measles or other eruptive disease. Other cases present themselves where the patient has taken no systematic treatment, and has dragged on for years with the disease and is now in a condition almost as serious as a patient with phthisis. In truth, all physicians will readily agree that in many of these patients the results of the disease are the same whether we are able to find the Koch's Bacillus in the sputum or not. The treatment of chronic bronchitis is best considered under three heads. First, hygienic treatment; second, treatment of prominent symptoms; third, the administration of agents which exert a curative influence.

In carrying out the first indication, it will be necessary to have our patient dress in such a manner as to thoroughly protect himself against the viscissitudes of the weather. The feet should be kept warm and dry. Warm clothing, and especially clothing which protects the chest should be

worn. I make it a rule to have my patients wear a sleeveless chamois jacket next to the skin, or over the undershirt on all patients whose occupation entail exposure. The paper vests sold in the drug stores are excellent for ladies and those who go out occasionally. Attention also to diet is most important. Such foods as are known to tax the digestive organs and foods that do not adequately nourish the patient are to be avoided. In a word, much can be done to improve the condition of the patient, if attention be paid to these details.

The treatment of prominent symptoms will next claim our attention. Of course these patients come to us for relief of cough. That symptom is the most prominent of all and will therefore demand special attention. The administration of cough mixtures will do little to affect a cure in these cases, and the best measures are those which mitigate the severity of the cough. Nearly all cough mixtures contain opium in varying proportion, and upon this agent the efficacy of many cough remedies are dependent. I employ opium for the relief of cough in such cases as are attended with very irritable cough. Some patients will remain awake half of the night coughing if they do not receive something to soothe them. In these cases it is well to give codeine, in doses of half grain every hour, until relieved. This remedy is superior to other opiates since it does not produce constipation and interference with the secretions, yet I never give it for a long period, never longer than a few days. In fact, such agents become useless, in most cases, if we give well directed remedies to exert a curative influence. These agents we direct the patient to use with caution and only when the cough is aggravating, or when it keeps him awake and in that way cause him loss of strength.

Night sweats and dyspepsia are also complications, or rather prominent symptoms of this affection, which demand attention. Belladonna, (the fluid extract) given at bed time will relieve the night sweats, until by proper constitutional treatment we can so reconstruct the patient he will not have the symptoms.

Dyspepsia is in this and all other affections attended with lowered vital resistance, a symptom which may be exceedingly troublesome. The digestive ferments will often prove efficacious in bringing a cessation of this symptom until the patient has regained his strength. Other symptoms may be met and will have to be met on rational grounds. But what can be done in the way of exerting a curative influence on the disease process?

Cod Liver Oil formerly was the chief reliance of the profession for the relief of this affection. Yet, all along, many of the ablest and most practical men in the medical profession refused to employ this agent on account of its indigestibility, its disgusting taste and failure to get good results from it. These and other reasons stand against Cod Liver Oil, while we have another agent that has none of these drawbacks and is at the same time pleasant to the palate, is a reconstructive, exerts an antiseptic and sedative action on the inflamed tubes, and is a tissue builder of a degree not surpassed by any agent at our command.

The remedy I refer to is Terraline. It is a preparation of petroleum, very palatable and I have employed it for years with happy results. This remedy is given to an adult in doses of one to two teaspoonfuls after each meal. I usually mix this with a wine glass or half a wine glass of port or sherry wine. I also have patients to take a dose the last thing on retiring to bed. This makes four doses daily, which soon causes the cough to become looser, less abundant expectorations, and the patient soon ceases to have irritation of the tubes, with protracted attack of coughing.

In some cases, we will find that other disease influences may be present, as syphilis, struma, anæmia and other factors of a like nature. Manifestly, it is important for the physician to take these factors into account and treat his patient accordingly.

In a word the physician must never fail to weigh carefully all the factors in the case under his treatment and give his patient those remedies which are rationally indicated.

Below I give in a brief manner, the histories of several patients who have been treated on these lines.

Miss A. Y. W., age 20, consulted me for a cough, which had been present for about eighteen months. She had lost flesh very considerably, was pale, weak and low spirited. She very frequently stayed awake half the night coughing and every morning had a coughing spell that racked her very much. She had a cough, too, that was characterized by "hacking" and the bringing up of tenacious mucous. Very often she had night sweats but these were not constant. Her appetite was indifferent and capricious.

She was put on Terraline in doses of two teaspoonfuls in sherry wine after meals and on going to bed. She was given a few powders of codeine, but was told not to use one unless her cough was particularly troublesome.

After using these remedies for ten days she felt improved and after six weeks her cough had been so mitigated and her general condition so greatly improved that she might leave off the remedy. But I had her to take it two weeks longer. She is now entirely well and has not taken any medicine for several months.

S. G., age 13, was brought to me for a cough that had been present for two years. She had two years ago suffered with measles and every fall and winter she suffered with a cough of a most irritating and distressing character. She was put on Terraline in doses of a teaspoonful four times daily. The girl's mother was cautioned to see that her hygienic conditions were looked after, and the girl had all the attention possible. On this treatment her cough became gradually less, she gained in flesh and in a period of six weeks, was pronounced cured. The girl wore a chamois jacket. She never missed school a day.

Mr. J. Y. M., age 29, had been a sufferer from bronchitis for two years and was weak and depleted in flesh and apprehensive lest he was going into consumption. His expectoration was scant and he coughed a great deal at night. He was put on Terraline, two teaspoonfuls four times daily in sherry wine. A chamois jacket was worn over the undershirt, and he was cautioned to use the best hygienic rules. He was given nothing for the cough *per se*. On this treatment he got along well and in three months presented the appearance of a well nourished man with no cough. He has no recurrence of symptoms now after a year.

These are only a few of the many cases treated on this principle, and were selected at random from my notes.

Dr. Robert C. Kenner,
Louisville, Ky.

Holocain in Ophthalmic Surgery; Its Superiority Over Cocaine; Its Therapeutic Value. †

The new local anesthetic, holocain, to which the writer called attention more than a year ago (Boston Med. and Surg. Jour., June 3, 1897), has not yet come into very general use, judging from the little reference made to it in the medical press, as well as the indifference manifested by so many of those who have become habituated to the employment of cocaine. Believing as I do that the latter drug is in many important respects distinctly inferior to holocain, and having used the new agent almost exclusively for the past sixteen months, I have thought that a brief record of my own personal experience might not be without value.

In the operation for the extraction of senile cataract it is a most efficient anesthetic. While not superior to cocaine in its superficial effect, it undoubtedly causes a greater degree of insensibility of the iris. Where a simple extraction is not performed and an iridectomy has to be done, we are all familiar with the start the patients may give, as well as the pain they complain of, at this stage of the operation. Under holocain, applied after the corneal cut has been made and the anterior chamber evacuated, it is my experience that the iris very generally allows itself to be seized with the forceps and excised without much if any suffering. This is a very great practical advantage. In connection with the operation of extraction, however, it is but fair to remark on the fact that the holocain does not control hemorrhage as cocaine does, and that where the latter agent is not used we are liable to meet with a troublesome amount of bleeding.

For the removal of a foreign body from the cornea, holocain is decidedly preferable to cocaine, as it neither affects the accommodation nor enlarges the pupil, thus rendering its use possible in the case of people with a tendency to increase of ocular tension. In other operations on the cornea or iris, such as that of Saemisch for ulcus serpens or iridectomy for glaucoma, it is a well known fact that a degree of inflammation that prevents the absorption of cocaine will often yield to holocain, thus rendering the use of ether or chloroform unnecessary. Had cocaine alone been at our command, general anesthesia would have been the only resort.

In the various operations on the muscles of the eye, no local anesthetic has been found to give entire satisfaction. It can only be claimed for holocain in this connection that it is at least as efficient as cocaine, and can be used in cases where distressing constitutional symptoms have been produced by the latter.

In probing the lacrymal passage I still make a preliminary injection of cocaine, the poisonous effects of holocain, when administered internally, rendering it unsuitable for such a purpose. For the same reason no subcutaneous injection of the drug can be made. But in the numerous cases where I have used it locally and superficially I have never seen the slightest general disturbance,

†Dr. H. Derby, Archives of Ophthalmology, Vol. xxviii, No. 1. 1899.

To sum up, then, the advantages of holocain over cocaine:

1. It does not cause mydriasis, and may therefore be used without danger of bringing about increase of tension.

2. It does not affect the accommodation.

3. It brings about a greater degree of anesthesia of the iris than does cocaine.

4. In cases of severe and painful inflammation which resist cocaine, holocain often proves efficient.

5. Unless swallowed or injected subcutaneously it produces no constitutional effects.

6. It has no effect on the corneal epithelium.

7. It is strongly bactericidal in its action.

Per contra, cocaine distinctly reduces the tendency to hemorrhage, and it can be injected into the lacrymal sac, and often subcutaneously, with comparative impunity.

Such being the facts, it would certainly seem that, in the great majority of cases, holocain should supersede cocaine as a local anesthetic in ophthalmic surgery.

A single word in regard to eucaine, which has also been proposed as a substitute for cocaine. My opinion of its efficiency is based on the following occurrence. I had operated in January of the present year on a lady of eighty for the extraction of cataract. Holocain was used, and the operation passed off well, causing little or no pain. A month ago I undertook to remove the cataract on the second eye. My nurse, a graduate of the Infirmary Training School, had been used to cocaine, and had never seen anything else employed at an extraction. I was pleased to be able to call her attention to the advantages of holocain, and promised her a proof of its anesthetic value on the present occasion. Greatly to my mortification, as well as astonishment, the patient complained bitterly of the pain, and asked me after the operation why it hurt so much more than it did the first time. On my reaching home the mystery was explained. I had taken by mistake a bottle of a two per cent. solution of eucaine B, and had not noticed the substitution until my return.

But I have found a possible use for holocain that, as far as I am aware, has not yet been adverted to. It is based on its bactericidal properties, which were so carefully investigated by Heinz and Schlosser (Klinische Monatsblatter, Jahrg. xxxv., S. 117).

If the immediate cause of corneal ulceration is, in accordance with the present theory of suppuration, the invasion of the territory by micro-organisms (Fuchs); if the ulcus serpens arises through infection of the cornea by organisms which give rise to a purulent inflammation (Fuchs); if so severe a remedy as the actual cautery has sometimes been efficient in bringing about a cure, why may not germicidal action be induced through milder means than the application of a high degree of heat, or the clumsy and round-about method of the subconjunctival injection of corrosive sublimate?

"On the development of bacteria," say Heinz and Schlosser (*loc. cit.*), "holocain exerts an energetic restrictive influence. A 0.1 per cent. solution plainly retards putrefaction and fermentation; a half per cent. solution prevents any development of bacterial germs; multiplying fission fungi are killed by a one per cent. solution. One per cent. holocain is therefore an active antiseptic."

The use of holocain in ulcers of the cornea seemed to be sufficiently indicated by the foregoing, and I began to employ it during the past year. My observations have been limited in extent, but thus far they have gone to convince me that holocain has a therapeutic value previously unsuspected.

A middle-aged man, in good health, had been for three weeks under my care for progressive corneal ulcer. He had used pilocarpine, cocaine, atropine, fomentations and the compressive bandage without benefit. The pain had become excessive and the process had begun to take on the character of an ulcus serpens. I had begun to entertain thoughts of Saemisch's operation or the application of the actual cautery. I applied holocain, which I had never before used in a similar case, with the idea of relieving the nocturnal pain. Employed at first in connection with the other remedies, it was finally used alone, an immediate improvement seeming to follow its application. In the course of ten days the cornea had almost entirely cleared and the patient was discharged. There has been no relapse.

Another patient, also a man of middle age, had been under my care since December 10, 1897, with small corneal ulcers. These were peripheric, involved but slight loss of substance, but were extremely painful and very obstinate, yielding but slowly to treatment and constantly recurring. Finally, June 12th, I applied holocain to relieve the pain. Three days later the patient was well. At a subsequent attack, he himself applied cocaine, with the result of distinctly aggravating all the symptoms. Holocain was then substituted, and the attack was cut short. In five days he was well, and has had no attack since June 21st.

My brother, Dr. R. H. Derby of New York, writes me as follows:

"In June last I had a case of purulent conjunctivitis that had been treated for three days with ice and nitrate of silver, the usual remedies. When I was called in, the conjunctival symptoms had largely abated. There was on the left cornea a central ulcer, deep and threatening. The patient was a girl of sixteen and was found to have a leucorrheal discharge. The secretions from the eye had been examined twice, and the diagnosis of gonorrhœal ophthalmia had been made. I was told, however, that no gonococcus had been found. It was about that time that you wrote me of the value of holocain in cases of infected corneal ulcer. I made instillations of this drug, together with atropine and occasional warm compresses of camomile. The improvement in the corneal process was very rapid and the eye shows to-day a small central corneal macula, with a vision of ten-tenths."

For the following case I am indebted to Dr. Myles Standish of Boston, in whose practice it occurred:

"Mrs. E. M. H., married, forty years old, came, June 1, 1897, with two infiltrated ulcers of cornea in the right eye, pin-head in size, and at about the margin of its pupil when moderately dilated, also with a gray infiltration just below pupil in the left eye. The ulcerations failed to heal, did not greatly extend in area; for several weeks new blebs appeared in each cornea which soon became ulcers, and about February 1, 1898, the ulcers increased in size on both corneæ. Patient up to this time had been treated with some antiseptic ointments, having for their active principle either the yellow oxide or the red iodide of mercury. Had also had atropine and at times pilocarpine and hot fomentations.

About February 5th patient was put on a solution of holocain and all other treatment omitted. There was immediate improvement, and new herpetic blebs ceased to appear. Eyes steadily improved. April 4th holocain was omitted, and on April 12th the patient returned with a new ulcer on the cornea of right, which did well when holocain was resumed. This experience was repeated on two subsequent occasions, and holocain was only finally omitted on June 15, 1898.

While so brief a series of cases convey no certain proof of the value of holocain as a therapeutical agent, it distinctly encourages additional investigations in this direction.

That holocain has its limitations, even as an analgesic, is shown by my recent experience in a protracted and most painful case of double scleritis. While cocaine had absolutely no effect, holocain caused a disagreeable, burning sensation, lasting some hours after each application, and obliging its discontinuance. Relief was only obtained by leeching the temples and the use of fomentations.

Operations on Syphilitics.

Dr. Michailow is credited as saying (Med. Record, April 8,'99) that he has within the last three years operated upon two hundred syphilitic individuals, mostly women, and has observed that in these patients there exists a certain diathesis which exerts an unfavorable influence upon the ultimate result of the operation; the diathesis consists especially in changes of the vascular system, morphological alterations in the quality of the blood, and specific changes in the skin itself. These changes naturally play an important part in the process of cure. The syphilitic diathesis lacks uniformity in the various organs and tissues, and is more marked in the gummatous stage. In operating upon syphilitic individuals, hemorrhage of the tissues, namely, in the gumatous stage occurs very easily; even in extraction of teeth profuse hemorrhages may occur. In certain instances pigmented infiltration of the edges of the wound is observed, so that the latter are elevated above the skin surface. Primary infection, even with the most scrupulous asepsis, frequently fails, and even the healing of granulations are scarce, mostly in the stage of fatty degeneration, occasionally large, œdematous, and colorless. The wound gives off a profuse, stinking secretion, and its edges become atrophic. Elastic bandages or washing carbolic acid easily lead to necrosis in the region of the wound, whereas the local application of warmth exerts a very favorable influence upon it. In the codylomatous stage the great development of scar tissue is frequently observed. Plastic operations are often without results in syphilitics. This syphilitic diathesis is very slight, at times not at all marked in persons who have a mild form of the disease or in those who have through it many years before, as well as in individuals who have been subjected to an energetic specific treatment. It must be accepted as a rule, however, to subject all syphilitics to a specific line of treatment before an operation is undertaken.

Statistict show that chloroform is less dangerous in warm than in cold countries. It is advisable, therefore, whenever for any reason chloroform is to be preferred to other anesthetics, to see that the operating room has a high temperature.

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Measurements of Pain.

Arthur MacDonald, in an article read before the American Psychological Association, concluded as follows (Medical Record, April 8th, 1899):

1. In general the sensibility to pain decreases as age increases. The left temple is more sensitive than the right. This accords with former experiments, that the left hand is more sensitive to pain than the right hand. There is an increase of obtuseness to pain from ages ten to eleven; then a decrease from eleven to twelve; then an increase from twelve to thirteen. From thirteen to seventeen, while the right temple increases in obtuseness, the left temple increases in acuteness. This is in the post-pubertal period. There is a general variation, which experiments on larger numbers might modify.

2. Girls in private schools, who are generally of wealthy parents, are much more sensitive to pain than girls in the public schools. It would appear that refinements and luxuries tend to increase sensitiveness to pain. The hardihood which the great majority must experience seems advantageous. This also accords with our previous measurements, that the non-laboring classes are more sensitive to pain than the laboring classes.

3. University women are more sensitive than washerwomen, but less sensitive than business women. There seems to be no necessary relation between intellectual development and pain sensitiveness. Obtuseness to pain seems to be due more to hardihood in early life.

4. Self-educated women who are not trained in universities are more sensitive than business women. Giving, then, the divisions in the order of their acuteness to the sense of pain, they would stand as follows: 1st, girls of the wealthy classes; 2d. self-educated women; 3d, business women; 4th, university women; 5th, washer-women. The greater sensitiveness of self-educated women as compared with university women may be due to the overtaxing of the nervous system of the former in their unequal struggle after knowledge.

5. The girls in the public schools are more sensitive at all ages than the boys. This agrees with the results of our previous measurements, that women are more sensitive to pain than men. These measurements of least disagreeableness, or of threshold of pain, are approximate measurements of the combination of nerve, feeling, and idea.

The Vitality of Epithelial Cells, and the Etiology of Cancer.

What the nature of the irritant may be that causes the localized overgrowth of epithelial cells which we call cancer, we are yet no nearer knowing than we were before the demonstration of its exact pathology, more than half a century ago. Notwithstanding all the claims that have been made of the causal influence of external biologic factors, parasites from bacteria, and fungi, schizomycetes, and blastomycetes to various forms of animal parasites, gregarines and protozoa generally, we are no nearer the solution of the problem than we were before.

Of late the subject has been approached from the other side, the essential vitality of epithelial cells and their reaction to various irritants, and some most interesting results have been obtained by various observers. In Dr. Hektoen's review of this subject for the first number of "Progressive Medicine"† (the advance sheets of which are in our hands), we find some striking observations on the subject collated. Ljunggren, a Scandinavian physician, for instance, found to his surprise that he could preserve carefully sterilized bits of human skin in sterile human ascitic fluid for months, and that the cells of the tissues retained their vitality. Three months after their removal from the body the cells of the deeper layers showed well stained nuclei, and good protoplasmic structure. Successful transplantation was made with pieces kept in such sterile fluid for a month. Small pieces of the transplanted skin were removed at varying intervals, and it was found that a marked proliferation of epithelial cells showing many nuclear figures had occurred. Special precautions were taken, which absolutely assured the absence of cells that might have grown in from the surrounding cutaneous margin and so vitiated the conclusions. The transplanted cells not only grew over the raw surface, but penetrated, also, into the granulation tissue beneath, after the manner of a beginning carcinomatous growth.

Almost more interesting and suggestive than this are the observations made by Loeb here in America on epithelial regeneration. The abstract of them by Dr. Hektoen in "Progressive Medicine" is so clear and succinct that we copy part of it verbatim: "From the margin of a tissue-defect huge epithelial protoplasmic or plasmodial masses move in a sliding manner over the naked surface, inclosing and dissolving the crust and other obstacles. Regenerating epithelium readily removes such substances as cartilage when placed in its way. Below the protoplasmic layer epithelial cells wander in from the margins of the defect, and often grow down into the connective tissue, apparently checking the growth of the latter. The process is closely allied to changes in carcinoma. At the same time active changes, such as mitoses, occur in the epithelial cells removed some distance from the margins of the wound. Loeb believes that the wandering of the cells, as outlined, is in response to stereotropism, and forms a determining in inducing mitosis in the remaining cells." The pregnant significance of these observations, especially the apparent action at a distance of epithelial elements in arousing epithelial cells into reproductive and germinal activity, can scarcely be over-estimated. This is the essence of carcinoma, though in healthy subjects the vital resistance may be sufficient to restrain the morbid overgrowth that would otherwise result.

According to Loeb, "if a small bit of epithelium is placed in the centre of the crust covering a defect in the skin, it begins to send out processes in all directions into the crust, the cells acting as separate organisms, independent of blood supply or nervous influence." We are evidently closely in touch, in these manifestations, with the as yet inexplicable vital forces that we see at work in all their untrammelled energy and power in cancer. Further observations are needed to give the deductions from these observations practical application. They constitute, however, the most hopeful aspect of the present pathological work on cancer as far as regards the near prospect of discovering etiology. Their value as additions to biological science, especially to that mysterious problem, the struggle for life among the various cells of the body tissues, can scarcely be over-estimated.

†Progressive Medicine," a Quarterly Digest of New Methods, Discoveries and Improvements in the Medical and Surgical Sciences. Volume I, No. 1, March, 1899. Edited by Hobart A. Hare, M. D. Lea Brothers & Co., New York and Philadelphia.

Tri-State Medical Society of Iowa, Illinois, and Missouri.

The seventh annual meeting of this society will be held at Quincy, Ill., on April 4th and 5th. The officers of the society are as follows: President, Dr. C. E. Ruth, Keokux, Iowa; First Vice-President, Dr. J. C. Murphy, St. Louis, Mo.; Second Vice-President, Dr. George L. Eyster, Rock Island; Treasurer, Dr. D. S. Fairchild, Clinton, Iowa; Secretary, Dr. J. W. Fowler, Dubuque, Iowa.

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Literature on Application.

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Toxines in Dermatology.

Hallopean, according to the Maryland Medical Journal, believes that toxines play a very important part in the production of dermatoses, and he even goes so far as to assert that they are the immediate cause of the great majority of cutaneous diseases. He applies the term toxines to "all morbific substances produced by living organisms," so that stings of insects, jelly-fish, certain vegetable poisons, etc., are regarded as toxines. He explains the pruritus of jaundice, the eruptions and pruritus of diabetes and the eruptions caused by abnormal renal secretions as being due to alteration in the quality of or excessive variation in the quantity of the normal products of secretion. The toxines of microbic origin which are produced in the alimentary canal are a frequent cause of cutaneous diseases. The eruptions which sometimes occur in the course of diphtheria, gonorrhea and the exanthematous eruptions are probably produced by the toxines resulting from the respective micro-organisms. Hallopean thinks that toxines may be the cause of such diseases as acute eczema, psoriasis, pemphigus, etc.

Further Uses of Ureteral Catheter.

At a recent meeting of the Johns Hopkins Medical Society, Dr. Kelly spoke of some further uses of the ureteral catheter. (University Medical Magezine.) He said that it seemed some month ago that certain disceveries would limit very much the use of the renal and ureteral catheter. It was found to be possible to separate the urines and retain them separated in the bladder until discharged from that organ by tubes. This was done by means of an instrument, which consisted of a tube with a solid septum running down the centre and projecting beyond the end of the glass tube, so that urine running down from one ureter remained on its own side of the septum, while that from the other ureter was confined to the opposite side. This method was published in the Deutsche medicinische Wochenschrift of October, 1898, and not long after Dr. Harris, of Chicago, was able, by the use of an instrument, to form two little pockets in the bladder for the accumulation of the urines from each side, which could then be drawn off by a suitable catheter. At first it looked as if these methods might limit very much the further use of the high catheter, but a new and very important use for them has developed.

In a certain number of cases we have to deal with vague but depressing pains in the side, particularly the right, and one is long in doubt as to whether they are renal, hepatic, or intestinal in character, or whether they are really hysterical. He has been able to include or exclude the kidney as a causative factor by the use of the catheter. When the ureteral catheter presses upon the pelvis of the kidney the patient will sometimes say that that is the very point where she had the pain. Further than that, he has been able to produce an attack of artificial renal colic by injecting a solution of boracic acid into the kidney through the catheter.

The doctor referred to a recent case which illustrates well the value of the catheter. The condition was so like a floating kidney that he unhesitatingly made that diagnosis, but passed in a catheter first and produced an attack of colic, which the patient did not locate in the lump which was felt in front, but insisted that it was in the back. At the operation he found an enlarged gall-bladder in front of the kidney, which was in its normal position, so that the location of the pain by the patient outside of the kidney when artificial colic was produced was correct.

Ocular Evidence of Hysteria.

Casey Wood, in a recent issue of the American Journal of the Medical Sciences, draws the following conclusions from a study of this subject:

1. Most cases of hysteria present well-marked, easily detected eye-signs and symptoms.

2. A few ocular symptoms, such as a reversal of the relation of the colorfields and the field for white, the tonic form of blepharospasm, spasm of accommodation and convergence, and pseudoparalytic, may be regarded as pathognomonic of hysteria.

3. Defects of vision (in the absence of refractive errors, accommodative anomalies, and fundus lesions) are, generally speaking, hysterical, if accompanied by photophobia and any form of blepharospasm.

4. No examination of a patient for hysteria should be regarded as complete without considering the condition of his ocular apparatus.

5. Where there is no conclusive external evidence of the neurosis present the perimeter should be carefully used, the range of accommodation should be noted, and the ophthalmoscope employed.

6. It should always be remembered that ocular hysteria is common in children and men.

7. Organic disease (traumatism especially) of the eye may accompany functional disturbances of that organ.

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Treatment of Chronic Leg Ulcers

Thoroughly wash and irrigate the ulcer and adjacent parts; after drying apply **Antinosine** (pulv.), distributing the powder lightly over the entire surface. Over this place a nosophen-gauze dressing, the whole held in place by a roller bandage. In cases with hard infiltrated borders, precede the above treatment by curetting.

ANTINOSINE

(the sodium salt of tetraiodo-phenolphtalein) has been proven by extensive and most severe clinical tests to be beyond question the most efficient of all existing antiseptics in the treatment of ulcers and abscesses generally, infected wounds of any natuae, very useful in palative treatment of cancerous ulcerations, lupus, etc. ANTINOSINE is absolutely non-toxic, non-irritating and odorless. It is freely soluble in water and in solutions of 1 to 2½ per cent. gives most excellent results in cystitis, as an injection in gonorrhœa, as an antiseptic fluid in ear, nose and throat practice, etc.

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Selling agents for the Bayer Pharmaceutical Products:

Aristol, Creosote Carbonate (Creosotal), Europhen, Ferro-Somatose, Guaiacol Carbonate (Duotal), Hemicranin, Heroin, Iodothyrine, Lacto-Somatose, Losophan, Lycetol, Phenacetin, Piperazine-Bayer, Protargol, Quinalgen, Salicylic Acid, Salophen, Somatose, Sulfonal, Tannigen, Tannopine, Trional.

Infection of the Mother from the Fetus.

Salomon (Obstetrics, January, 1899) says that infection of the fetus from the mother has long been an accepted fact. It must necessarily follow, he believes, that the fetus under certain circumstances may in turn at a later date reinfect the mother. In each instance infection occurs through the placenta.

He relates a case in which a healthy young woman, four months pregnant, exhibited signs of intoxication resembling meningitis, the condition terminating a month later in abortion. The maternal symptoms immediately vanished.

A hitherto undescribed bacillus was cultivated from the blood, liver, spleen and bone marrow of the fetus, and the cultures were fatal to mice.

Salomon cites a few cases from literature which seem to illustrate the existence of the following cycle: infection of mother, subsequent infection of fetus, and at a later date re-infection or intoxication of the mother, perhaps from the germs or toxines formed during the fetal disease.

Report of 78 Cases of Pulmonary Tuberculosis Treated with Watery Extract of Tubercle Bacilli.

A report of 78 cases of Pulmonary Tuberculosis, treated at The Winyah Sanitarium, at Asheville, N. C., in 1898, with Watery Extract of Tubercle Bacilli, by Dr. Karl von Ruck, appears in the February number of the Therapeutic Gazette.

The author giving due credit to the advantages of the favorable climate of the Asheville plateau as well as to the systematic employment of hygienic and dietetic methods, in a special institution, shows nevertheless by his results the unmistakable influence of this preparation, which he perfected in his Laboratory in February, 1896.

He with many others, notably Professor Koch, have long realized that the bodies of tubercle bacilli contain a soluble substance, a proteid upon which the curative action of all tuberculin preparations and modifications must depend, small and variable quantities of which were thought to enter into the culture fluid from which the tuberculin preparations are made.

Experiments upon animals have shown that the injection of dead tubercle bacilli produce both curative and immunizing effects, but they have always produced abscesses at the point where they were injected and often spurious tubercle in the animals experimented upon, conditions which seemed to preclude their use in the treatment of human tuberbulosis.

A solution of the tubercle bacilli, without injury to the curative proteids was therefore naturally sought for, and in April, 1897, Professor Koch announced that he had accomplished this in the production of Tuberculin R., which was then given to the profession.

Several weeks later Dr. von Ruck announced his success in also making the desired solution and communicated his experiments and methods in a paper read before the American Climatological Association and published in its transactions for 1897 and also in the Therapeutic Gazette for June, 1897. His method of preparation differs from that published by Professor Koch and is briefly as follows:

The tubercle bacilli are filtered out of the rapidly growing and highly virulent culture. After washing with distilled water for the removal of the remains of the culture fluid, they are dried in a vacuum dessicator. Next they are provided in an agate mortar and then extracted with sulphuric ether. This extraction removes the fats. They are again dried and powdered as before and their further extraction takes place in sterilized distilled water over a water bath with a temperature of 120 F. The proteids becoming dissolved in the distilled water, the fluid is then decanted and filtered through porcelain, when finally the amount of proteids is determined and the preparation standarized to a certain per cent.

Prof. Koch simply triturated his tubercle bacilli and then put them into distilled water and separated the undissolved germs with a centrifugal machine. His preparation did however not pass through a porcelain filter and it was subsequently shown that when an attempt of filtering through porcelian was made, a residue collected in the filter consisting of Tubercle Bacilli.

Virulent infection followed the injection of this residue in animals and for this reason Professor Koch was obliged to withdraw his Tuberculin R., it being an emulsion of tubercle bacilli and fragments of such, rather than a true solution.

Koch's claim that in a true solution of the tubercle bacilli the final perfection of a specific remedy was attained, would appear to be verified by the results which Dr. von Ruck reports.

He treated with his Watery Extract 20 cases in the early stages, all of which recovered, with an average gain of 11 pounds in weight, and subsidence of all symptoms.

Of 37 cases in a more advanced stage 27 recovered, 7 were greatly improved, 3 improved, and none grew worse, gaining on an average nearly 13 pounds each.

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Twenty-one cases in a seriously advanced stage were also treated, of which 3 recovered, 9 were greatly improved, 7 were improved, only 2 grew worse or died, there being an average gain in weight of 10½ pounds each.

The remedy was also given for trial to Dr. Denison, of Denver; Dr. Taylor, of St. Paul, and Dr. Williams, of Asheville, all of which obtained good results. Dr. Williams supplying the date of 12 cases treated by him with von Kuck's extract, shows 7 early stage cases, all of which recovered; of 3 cases in the second stage, 1 recovered, and 2 were greatly improved, and of 2 far advanced cases, 1 recovered and one grew worse.

Comparing his previous results with those obtained with the watery extract in von Ruck's institution he shows the results as follows:

	Cases.	Recov'd. pr. ct.	Imp'vd. pr. ct.
Treated without Specific Remedies,.....	816	12.1	31.0
Treated with Koch's original Tuberculin,.....	379	35.5	37.5
Treated with Antiphthisin Tuberculocidin,....	182	32.5	46.8
Treated with Tuberculinum Purificatum (von Ruck)	166	43.4	39.2
Treated with Watery Extract of Tubercle Bacilli (von Ruck).....	78	64.1	33.3

Among other matters of interest, the report also contains mention of Dr. von Ruck's efforts to produce a serum, as suggested by Professor Koch, in his paper by using Tuberculin R. and his Watery Extract for immunization. Dr. von Ruck used goats for the purpose and injected them in increasing doses reaching 70 c. c. per single dose in the course of six months.

Serum taken from these animals failed to protect or cure guinea pigs, and finding his results entirely at variance with the claims of Dr. Fisch, he purchased serum from Dr. Fisch's laboratory and treated a number of guinea pigs, all with negative results.

These experiments are given in detail and it does not appear that the degree of tuberculosis or its course was in any way modified by the injection of this serum; the control animals showing no greater progress in the disease than did those which were treated.

Full directions are given for the use of the Watery Extract, the beginning dose being 10-1000 of a milligram, and this is gradually increased to 5 milligrams. There are three solutions. No. 1 containing 1-100 of one per cent. No. 2 1-10 of one per cent., and No. 100 containing 1 per cent. of the anhydrous extracts.

Edema in Bright's Disease.

Reichel, according to the University Medical Magazine, states that several years ago he expressed the opinion that impaired functional activity of the kidney led to a physical alteration in the tissues, owing to the retention of toxic substances in the blood; this produces the edema, and also cardiac hypertrophy, as a result of the increased arterial tension. Reichel has undertaken a series of experiments to support this view. He has compared the power of absorption in renal patients with that in patients with cardiac disease, as well as with that in healthy subjects. After the injection of fifty cubic centimeters of saline solution in these cases, he found that absorption occupied a much longer time (sometimes eight or ten days) in renal patients. The normal transudation and resorption of the tissue fluids depends on metabolism and the functional activity of the kidneys. Reichel claims that the dropsy of renal disease is due to an alteration in the power of absorption.

Sanmetto in Imitations.

I have used Sanmetto extensively for the last five or six years in both old and young, male and female, in all forms of irritation of the urinary organs, from nocturnal enuresis in the young to cystitis in the aged, and have been disappointed in but few cases in obtaining good results. Have tried imitations (owing to their cheapness). The results were unsatisfactory. Have returned to the use of Sanmetto as a sheet anchor in both acute and chronic conditions of the urinary tract. I obtained speedier and more satisfactory results when given four times a day in drachm doses in hot water.

T. B. Gullefer, M. D.
Greensburg, Ind. Coroner.

Maltine.

Extract from a lecture delivered at the Michigan College of Medicine and Surgery, By Dr. J. F. Bennett, Professor of Dietetics.

Maltine is a pure extract of malted barley, wheat and oats (instead of being made from only one of the cereals), containing all of the nutritive properties of these three grains, in addition to the valuable digestive agents, diastase. You will find it particularly valuable where you wish to get a bone-producing and fat-making substance combined with the digestive agent diastase. I use it daily in my practice, both alone and with the various tonics and reconstructives with which it is combined, with very satisfactory results.

THE BEST PREPARED FOOD.
FOR THE BABY, THE INVALID, THE CONVALESCENT, THE AGED.
HIGHEST AWARDS WHEREVER EXHIBITED.
IT CONTAINS NO CANE SUGAR, NO GLUCOSE, NO MALT.
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NOURISHING STRENGTHENING.
PURE SAFE
PALATABLE RELIABLE
IS THE STANDARD PREPARED FOOD
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SAMPLES FOR CLINICAL TEST SUPPLIED TO PHYSICIANS AND TRAINED NURSES ON REQUEST.
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PROVED BY CLINICAL SUCCESS IN THE PAST.
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SOLD BY DRUGGISTS EVERYWHERE.

Gray's Glycerine Tonic.

Charles B. White, M. D., 107 West 72d Street, New York, Visiting Physician, Harlem Hospital, says: I have used Gray's Glycerine Tonic in cases of so-called nervous debility, following grippe or tonsilitis. It has acted particularly well in cases where an inactive liver prevented the use of cod liver oil or cream. Patients who could not take either having no trouble in digesting the Tonic and improving rapidly while under its use. In anæmic cases have combined small proportion of the peptonate of iron with excellent results. For the ordinary cough with a dry throat have found it very useful in teaspoonful doses during the day, or combined with five or ten drops of spirits of chloroform to quiet the tickling and allow the patient to sleep at night.

Case I. Male, aged 30, formerly addicted to alcoholic stimulants and a year ago confined for a short time as a suspected case of paresis, due to over-indulgence in bromide, consulted me for the nervous depression following the use of morphine taken to relieve, while traveling, the pain of a fractured wrist. He was unable to sleep, had lost his desire for food, and complained of an uncertain feeling in the head that prevented his attending to his business or thinking connectedly on any subject. Occasional doses of sulfonal at night relieved the insomnia, and for some days hypodermics of strychnia were required, after which he went on to complete recovery under the Glycerine Tonic, which improved his appetite and increased his weight.

Case II. Child, aged eight, growing rapidly, brought to me with the history of a cough lasting several weeks, found on examination bronchial respiration over both lungs, more marked on right side, where there were also piping râles, and over all prolonged expiration. The child was listless, no fever, pulse 120. Under the use of the Gray's Tonic, given every three hours. her cough has ceased, respiration has become normal, appetite improved, and she feels and acts perfectly well.

Caies III and IV were typhoid fever with very slow convalescence and occasionally rises of temperature of a degree above normal in the evening. One of the patients, a young lady, had had several severe hemorrhages. The other one was fifty years of age. Two teaspoonfuls of the Tonic were given three times a day, and both patients made rapid recoveries.

Diuretin.

Dr. Dreschfeld read a paper on Diuretin at the fifth meeting of the Manchester (England) Therapeutical Society.

After referring to the experimental results and clinical experiences of this drug recorded by some continental observers Dr. Dreschfeld stated that he had employed Diuretin in many cases during the past eight years, and he considered it a valuable remedial agent. He had found it act well in acute Bright's disease, especially in cases in which the urine was scanty. He had frequently seen the urine increase in amount from 12 or 15 to 80 or 100 oz. in the twenty-four hours. In post-scarlatinal nephritis the drug did not seem to give such good results. In chronic parenchymatous nephritis he had found it act when digitalis and other drugs had not succeeded, but the effects were only temporary. There was no definite reduction of the amount of albumin. On the other hand, there was no evidence of irritating action. In interstitial nephritis the results had been disappointing and in these cases toxic effects were more liable to occur. As regards its use in heart disease Dr. Dreschfeld had found Diuretin of great value in cases of mitral diseases, especially when the dropsical symptoms had come on suddenly. In aortic disease the results had not been so satisfactory: there was no relief to the anginal symptoms, no great diuresis, and the drug was not always well borne. In simple dilatation without valvular lesion where digitalis had failed diuretin had sometimes succeeded. In cirrhosis of the liver the effects of diuretin were sometimes startling. He had seen diuresis amounting to four or five quarts of urine in the twenty-four hours. The cases which seemed to respond best to diuretin were those in which dropsy had developed suddenly. In older people with ascites coming on gradually diuretin had failed. In two cases of pleuritic effusion Dr. Dreschfeld had observed rapid recovery under the use of diuretin, but in other cases no marked effect was observed. In cases of peritonitis no relief had been obtained; he had not tried the drug in pericarditis and did not think it likely to be of much use. Dr. Dreschfeld considered diuretin to be a useful and powerful diuretic, acting probably on the epithelium of the convoluted tubules of the kidney. He gives it in from 10 to 12 gr. doses three times a day at first, increasing to 30 gr. doses if necessary. As regards its ill-effects, sometimes Diuretin is not well borne, producing nausea, vomiting, and occasionally signs of collapse. Often when diuretin alone does not answer it succeeds on combining it with digitalis.

In the discussion which followed, the Secretary of the Society on behalf of Dr. Steell, showed a series of charts illustrating the Diuretic Effect of Diuretin in cases of aortic disease, mitral disease, functional heart-disease, cirrhosis of the liver, and pleurisy. One of the charts showed a marked diuretic effect obtained three times in succession in the same patient. Dr. Steell gives diuretin in 2 gr. doses every hour day and night. In two cases of Bright's disease he had observed haematuria following the use of diuretin and had not employed the drug in such cases since.

Dr. J. Dixon Mann, the President of the Society, had observed similar results to those described by Dr. Dreschfeld, but he had obtained no good effects in cases of large white kidney. In heart cases he had found diuretin very useful. In cirrhosis of the liver he had observed little result, perhaps because the cases were of more gradual onset. He had found theobromine alone very useful and suggested that theobromine in some soluble form might be more advantageous than diuretin, which was sometimes depressing owing to the salicylate of sodium which it contained.—*London Lancet.*

Is Eczema a Parasitic Disease?

Torok in a critical study of the monograph upon eczema, recently published by Leredde, concludes as follows: (University Medical Magazine). In the consideration of eczema, in order to avoid confusion, it is always necessary to employ the terms used in the same sense as the authors cited. The impetiginoid lesion, which Unna calls true vesicular eczema or eczema from inoculation, is not an eczematous lesion, but a lesion belonging to impetigo. Consequently, if one succeeded in demonstrating that the morococcus, which Unna claims is the true cause of eczema, is a well-individualized coccus, and that it is the cause of the above-mentioned impetiginoid lesion, one would not yet have proved that it is the cause of common vesicular eczema. And this so much the less since the vesicles of ordinary eczema contain but rarely morococci. The presence of morococci in the scales of chronic eczema only proves the saprophytic—not the parasitic—*role* of these organisms. The clinical facts invoked in favor of the parasitic theory admit of other interpretations; and there is not, so far, a single established fact in favor of the parasitic nature of eczema.

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Animal and Vegetable Ferments.

Dr. A. E. Austin (Boston Medical and Surgical Journal, No. 23, 1898). Taka-diastase possesses a greater power of converting starches, in proportion to its weight, than does saliva or pancreatin, though perhaps the test was not fair to saliva, as the amount, one cubic centimetre, was arbitrarily taken as an equivalent to one-tenth gram pancreatin and taka-diastase; since, however, only five and one-half parts per thousand of saliva are solid, 5.5 milligrams are compared with one hundred milligrams. All of these digestants are practically nullified in an acidity equivalent to that of gastric juice, so that practically no digestion can take place in the stomach from any of these digestants. These digestants are not destroyed by the acidity of the gastric juice and there is no practical reason why their activity should not go on after they have passed into the intestines and alkalinity is re-established. Taka-diastase apparently carries the process of amylaceous digestion a step farther than the other two, forming dextrose instead of maltose. In how far this is of value we cannot say until we know more about the condition attending the secretion of succus entericus, which contains the major part of the invertin, and whether it is ever absent.

Caution in the Use of Proprietary Remedies.

However great the opposition on the part of many members of the medical profession to the employment of proprietary preparations, most physicians realize that justice to their patients as well as to themselves demands the use of such remedies. Such proprietary preparations do not, of course, include the secret nostrums, which no self-respecting physician will employ. The fact cannot be disputed that firms backed by abundant capital and employing skilled chemists, pharmacists, and even physiologists, are in a better position to discover new and valuable remedies than are private individuals without capital, system, or equipment. Nor can such firms be expected, after the expense and time involved in their labors, to make public the exact methods employed by them in the manufacture of their products. The medical profession demands that the composition of such remedies shall be known, and, this much being told, we cannot refuse to employ a remedy because the precise mode of making it is not divulged, any more than we would be justified in looking with suspicion upon the natural organic substances of the pharmacopœia, because we are ignorant of the manner in which the elements composing them have been brought together and combined in the laboratory of nature. The honesty of the manufacturing chemist must, however, be beyond question, for this is our only guarantee that the preparation which we prescribe to-day is the same as that which was used in the investigations that have given the remedy its standing. Moreover, in order to obtain similar results to those of the original investigators, it is absolutely essential that the same product be employed, and not one which in name is a palpable imitation of some really meritorious preparation. The imitation may in truth be "just as good," but it must be proved to be so by actual tests, precisely as in the case of the original, and not by assuming that what was demonstrated regarding the original is true of the imitation unless absolute identity of composition can be shown.

Whenever a preparation of value is perfected by the enterprise and patient investigation of any manufacturing chemist, there immediately appear upon the market a score of imitations, the manufacturers of which have expended upon their product a minimum of time, capital, and brains. To trade thus upon the reputation of an established remedy by similarity of name is culpable enough, but to go further and *appropriate for the imitation the literature of the original, making it appear that certain investigations which have proved the value of a given remedy apply not to this particular product, but to the crude ingredients which it contains, regardless of the special manner in which they are combined, is a form of imposition which should not be tolerated.* Yet just such a case has recently appeared, and it so emphasizes this point that we refer to it specifically, even at the risk of having it appear that the foregoing remarks are intended merely to lead up to an advertisement of this preparation. No proprietary preparation in recent years has attained greater or better deserved popularity than Gude's pepto-mangan, nor has any been handled in a more ethical manner. The natural consequence has been that innumerable preparations in imitation of this product have been placed on the market, all with more or less similarity of name, and all clearly intended to be sold on the merits of the original. The last of these is put up by a house whose circular quotes many physicians as attesting the therapeutic value of peptone combined with iron and manganese. As a matter of fact nearly all the authorities thus quoted stated specifically in their reports that their observations were carried on with pepto-mangan. The agents of Dr. Gude's preparation in this country have since received from most of the physicians whose statements were thus perverted written assurance to the effect that this is the case, and that they regard as gross injustice to themselves any attempt to make their statements apply to another iron and manganese preparation which they have never used.

Occurrences similar to the above are not infrequent, and the profession can protect itself against such impositions only by holding fast to the remedies whose value has been proved, not obstinately refusing to consider the claims of new preparations along the same line, but demanding that these latter shall go solely on their own merits, as shown by tests applied to them, and not assuming that the imitation possesses all the virtues of the original.

Dr. L. E. Schell, Assistant to Chair of Physiology, Detroit College of Medicines, and Surgeon to the Polyclinic, Harper Hospital Detroit, Mich., speaks highly of the diastasic properties of Maltine. Clinically he finds that the efficacy of the diastase is neither retarded nor impaired by the addition of an acid. One of his favorite prescriptions in certain indications is HCl in combination with Maltine.

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No. 22. RED GUM. Astringent.
No. 23. EUCALYPTUS (GUM AND OIL). Antiseptic, stimulant, and astringent.
No. 24. COCAINE. (1-20th grain). Sedative to the mucous membrane.
No. 24a. COCAINE. (1-10th grain).
No. 26. CODEINE. (1-8th grain Codeine). Sedative.
No. 27. COMPOUND EUCALYPTUS. (Red Gum, Chlorate of Potash, and Cubebs).
No. 28. COMPOUND GUAIACUM. (Guaiacum, Chlorate of Potash, and Red Gum).

No. 29. COMPOUND RHATANY AND COCAINE. (Ext. Rhatany gr. ii; Cocaine Hydrochlor., gr. 1-10th). A very efficacious astringent and anodyne.
No. 32. RED GUM AND CHLORATE OF POTASH. Astringent.
No. 38. CHLORATE OF POTASH, BORAX, AND COCAINE. (2 grains Chlorate of Potash, 1 grain Borax, 1-20th grain Cocaine).
No. 41. EUCALYPTUS OIL. Antiseptic and stimulant.
No. 43. MENTHOL. (1-20 grain). Stimulant and antiseptic.
No. 43a. MENTHOL. (1-10th grain).
No. 44. MENTHOL AND COCAINE. (1-20th grain Menthol and 1-20th grain Cocaine in each). Stimulant, antiseptic, and sedative.
No. 45. MENTHOL AND RHATANY. (Menthol, 1-20th grain; Extract of Rhatany, 2 grains). Antiseptic, stimulant and astringent.
No. 48. TANNIN, CAYENNE, AND BLACK CURRANT. Astringent, stimulant, and soothing.
No. 52. TANNIN AND BLACK CURRANT. Astringent and soothing.
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Epileptic Insanity.

J. H. McBride (Southern California Practitioner, December, 1899,) discusses this subject as follows:

All forms or varieties of epilepsy are liable to lead to insanity.

Nocturnal epilepsy and mental or cerebral epilepsy produce more rapid mental deterioration than other varieties.

Epileptic insanity may precede, take the place of, or follow a fit.

It may be a quiet type of insanity or the most violent mania.

The mania may occur only once in the course of the life of an epileptic who has the disease from childhood.

Epileptic insanity is a most dangerous form of mental disorder, as the subjects of it are suspicious, irritable, and impulsive, being conspicuously weakened in self-control.

A condition of mental automatism may follow an epileptic fit and may last for days, during which a person may transact business or buy a ticket and travel long distances, converse intelligently, and yet afterwards have no recollection of anything that occurred during the period.

Epileptic attacks may occur during sleep and not at any time or rarely during the waking state, and this nocturnal epilepsy is apt to be associated with violence and ultimate mental weakness.

Insanity is rather more liable to be associated with mild fits than with those in which the convulsions are violent.

Habitual epilepsy, if continued over a period of years, produces mental failure in some degree in all cases. Those who have a fit at long intervals, say once a year, do not, of course, come under the designation of habitual epileptics as the term is used here.

Acute Coryza.

In this unpleasant affection the action of Blennostasine is "magical." It arrests the sneezing and mucous discharge without producing serious after effects. Its superiority over quinine lies in the fact that it is a vaso-motor constrictor. Blennostasine is superior to belladonna, atropine, &c., as a blennostatic, is non-toxic, and can consequently be given in large doses if necessary without fear of after effects. It exerts a tonic effect on the vocal mechanism, and is especially valuable in colds of public speakers and singers.

Ocular Troubles in Diabetes.

Dianoux (Annales d'Oculistique, October 1898) gives the impressions which 23 years of practice have left: (1) As regards the lens loss of transparency may occur, leading surely to cataract, soft or hard, according to the patient's age; he has not noticed variations in vision consentaneously with the evolution of the diabetes. The soft cataract develops exclusively in young people attacked with acute or pancreatic diabetes, and become complete in a few months. Rapid cataract in an abdolescent should make us suspect diabetes. The grave form of diabetes has not the same action on the lens in the adult, in his experience; and he is doubtful whether in the chronic form cataract is of more frequent occurrence than in elderly people who are not diabetic. For senile cataract in the diabetic operation may be perfectly successful; whereas operation for diabetic soft cataract is frequently followed seven or eight days later by pulmonary apoplexy and death; and in any case the patient rarely survives twelve or fifteen months. (2) Vascular lesions; retinal hemorrhages in diabetes are found exclusively in old people; the fact of their non-occurrence in the young makes him doubt their direct dependence on the diabetes; he would rather attribute them to arterio-sclerosis. By direct examination the hemorrhages are seen to proceed from small veins or capillaries; he has never seen one originating from an artery. The blood is absorbed in the course of some months, and vision may become normal again. But prognosis is bad; a fatal issue from cerebral softening is ever imminent, though health may be maintained for years. Albuminuric retinitis may be associated with diabetic changes. (3) Central scotoma: the principal symptom is progressive failure of central vision, particularly for reading; with the loss of form vision goes loss of colour vision. As diabetics are often alcoholic and indulge in smoking it is often difficult to attribute the scotoma to the one factor; but Dianoux had seen central scotoma in women and young people who did not take alcohol, but who passed large quantities of sugar. Unlike alcoholic and tobacco scotoma, diabetic scotoma never disappears.

Iodia.

Case I.—M. S., fifty-two years of age, male, was some years afflicted with an obstinate form of erythema, probably of specific origin, which heretofore had resisted the usual constitutional and local treatments. The itching of the eruption was intolerable, the anemia very pronounced—the whole constitution run down. Six weeks medication with Iodia, supplemented by extract of malt and cod-liver oil, brought the case under control. I attribute the good effect of Iodia in this, as in other cases, not so much to its mineral ingredients (potass. iodide and ferri phosphate) as to their combination with the fresh principles of vegetable alteratives. I, for my part, believe that only the extracts of the green or fresh plants are reliable for therapeutic effects, the common fluid extracts of the dried plants having proven mostly inert in my hands.

Case II.—R. W., aet. 38; female; presented glandular enlargements complicated with functional disorders (dysmenorrhoea). The persistent administration of Iodia brought marked improvement and patient is on a fair way to recovery.

Case III.—J. P., male; aet. 60; blood-poisoning with chemicals used for dying, manifesting itself in a rupia-like erpution and general malaise. Iodia promptly eliminated the morbid matter.

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In a word, as a uric acid solvent Tongaline and Lithia Tablets are unexcelled, a conclusion which is not the result of experiments in vitro but of actual experience.

Samples of Tongaline and Lithia Tablets can be obtained by applying to Mellier Drug Company, 2112 Locust St., St. Louis.

Grip and Its Allies

The prevalence of grip and pulmonary troubles leade us to call special attintion to the value of Blennoetasine in treating these affections. When this remedy is given in the earliet stages of grip, the artack is usually absorbed, and in any case it is duration is cut remarkably short. Blennostatine relieves the excessive mucous discharge in a few hours, and also the headache which frequently accomdanies colds of the influenzal type. Its antifebrile action is particularly valuable in severe cases of grip, and its free from the toxic character of belladonna and the synthetic drugs.

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For the dispensing pharmacist to recognize the right of the physician to dictate, not only what remedy he shall use in a given case, but whose preparation he prefers, for the quality of the medicine is often as much a factor in the cure of disease as a correct diagnosis.

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A Curious Pocket Piece.

In the New York Medical Journal of February 4th. 1899, Dr. William S. Gottheil describes a case in which a woman carried a peice of her own skull in her pocket for years "for good luck." She applied for treatment for a different affection, and it was discovered incidentally that a syphilitic periostitis had begun again around the scar left by the ulceration from which her piece of bone had come twelve years before. As in the present case, she had not at that time attached sufficient importance to the matter to consult a physician about it. The sequestrum, of which she was quite proud, was an ovoid piece of bone measuring $2\frac{1}{2}$ x 2 inches, and was composed of two adjacent portions of the two parietal bones, the sagittal suture in the middle showing beautifully. Its upper convex surface showed the outer table of the skull intact. The under concave surface was composed mostly of cancellous tissue; but all along the middle line, at the suture, the inner table was present, showing that at that place the entire thickness of the skull had been lost.

Apart from its curiosity, the case is of intrest as showing the very extensive destruction of important organs that can take place in syphilis without systemic reaction or much personal inconvenience. The entire thickness of the skull had been destroyed, and the meninges necessarily exposed; yet the inflammation had not spread to those membranes, and the patient had hardly considered herself sick.

Vapor Massage.

Patents covering medical and surgical appliances were formerly looked upon with much disfavor by the medical profession. This rather narrow view has given place to a more liberal one which recognizes the right of the inventor to the same protection as is given in a copy right to the author of a medical book.

A very valuable invention of this class is the subject of a recently issued U. S. patent. The object of this invention is to supply a ready means for the treatment of respiratory and aural affections with compressed Nebulized Vapor, to which the inventor has applied the name, Vapor Massage.

The apparatus, which is manufactured by the Globe Manufacturing Company of Battle Creek, Michigan, has been thoroughly tested by many prominent specialists. The marked success which has attended its use has already resulted in the appearance of several imitations which are infringements of the patent referred to above.

Intending purchasers will do well to write the Globe Manufacturing Company for full information before placing orders.

An Emulsion.

Dunglison's Medical Dictionary defines Emulsions as follows: "Pharmaceutical preparations of a milky-white opaque appearance, composed of oil divided and held in suspense in water by means of mucilage.

Worcester says: "A medicinal preparation of milky appearance composed of a fixed oil divided and held suspended in water by means of mucilage."

There seems to be a very general agreement that mucilage is the essential part of oil emulsions. When the physician prescribes an emulsion of fat, he attempts to present fat to the absorbing vessels of the bowels ready for immediate absorption. Gum Arabic and Gum Tragacanth (the latter is generally used, and which is insoluble in water), are not foods. But when emulsions are prescribed, you are compelled to give not less than fifty per cent. of these substances, which are known to be inert, and which increase the difficulties of absorption. In an emulsion each oil globule receives an envelope or coating of gum, consequently the digestive fluids are not only compelled to break up the globules anew, but are first compelled, in order to reach the oil, to dissolve the envelop of gum.

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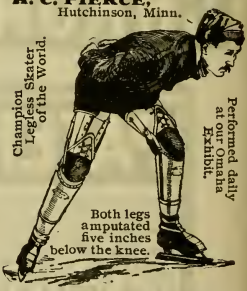
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(Department A.) **MINNEAPOLIS, MINN.**

Old Age and Sleep.

Dr. Gooch mentions the case of a man who lived to the age of seventy-three, in excellent health, although he could never sleep for more than fifteen minutes in each twenty-four hours. This case, however, is not well supported by evidence. General Pichegon assured an English gentleman that for a whole year, during important campaigns, he had restricted himself to one hour's sleep in twenty-four. Jeremy Taylor maintained that three hours' sleep a night was enough. The celebrated General Elliott, who defended Gibraltar, never slept more than four hours. Lord Brougham was generally content with less. Frederick the Great and John Hunter were satisfied with five. The Duke of Wellington and John Wesley took six. The explanation of their variations seems to lie in the fact that the *amount* of sleep cannot be measured by *duration*, and those who do not sleep very long enjoy a much deeper sleep than others.

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Conservative Surgery.

The following is a part of an editorial recently appearing in the Medical Review of St. Louis. It is to the point.

"Scientific conservatism in surgery is an exaction which it is pre-eminently just to demand form every surgeon. The term, scientific conservatism, as far as surgical operations are concerned, implies that exploratory operations should not be resorted to excepting, perhaps, under unusual conditions. Exploratory incisions are to be discouraged if they are the result of a lack of skill in diagnosis or inadequate knowledge of pathology. This is true of all operations, but especially so of those concerning vital organs. Truly scientific surgeons are usually also conservative. The *pros* and *cons*, based upon a careful diagnosis and the knowledge of pathology, must be carefully weighed before an operation is decided upon. The severing of the Gordian knot by operating where the exact indications can not be based upon the necessary foundation of a thorough knowledge of pathology and a pretty certain diagnosis, should be discouraged. Excepting under unusual conditions, strictly scientific indications are the requisites in determining the propriety of operating. It is a fallacy to believe that a practical knowledge of anatomy and a skillful handling of the knife are the only requisites in the education of a surgeon. It is at least equally necessary to be able to make a correct diagnosis for which a knowledge of pathology is a *sine qua non*. Any operative surgical procedure is not so harmless as some venturesome or impulsive persons seem to think. Discretion in operating increases with thorough knowledge and experience—attributes which must necessarily be supplemented, however, by a keen sense of moral responsibility."

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The Internal Use of Carbolic Acid.

By E. R. Maxson, M. D., A. M., LL.D., Syracuse, New York.

Messrs. Editors of The Charlotte Medical Journal, Charlotte, N. C.:

Your late editorial, headed "The Internal Use of Carbolic Acid," in which you give good authorities, in relation to its use in typhoid fever, scarlatina, etc., *abortive* and *preventive*; suggesting, also, what "*bravery*" might possibly do, for the profession, in that direction; has impressed me to offer you some of my experience, in that line of effort. But I have used it, internally, in the form of the sulphocarbolate of sodium; being efficient as an antiseptic; soluble and convenient, for use in solution; and in reasonable doses, without the dangers, of toxic effects, attending the internal administration of the crude article.

My experience in this direction has extended from observations in the Royal Infirmary of Glasgow, in 1867 with Professor, now Lord Lister, to the present time. And though my first efforts were with typhoid or enteric fever; as I have freely published, in medical journals, and elsewhere, it has been extended to all putrid, septic, and contagious diseases, that have come under my treatment, in a wide field of medical practice.

Having been dissatisfied with the former idea, still too prevalent, I think, that typhoid or enteric fever; and all contagious diseases must necessarily run on, for something near a limited time; and reasoning on what appeared to me to be a fact, that the different stages of what we formerly supposed to be self-limited contagious disease, could only be the disturbance of the system, while eliminating the microbial or other cause operating, and its consequences; I have been seeking measures for preventing, aborting, cutting short, or rendering lighter such diseases.

This I have published, from time to time, in the New York, and other medical journals; attempting to ascertain and destroy the microbial, or other cause operating, by safe and suitable antiseptics; in addition to what I had done in typhoid, and all contagious diseases, that have come under my treatment.

While I have used various antiseptics, with a degree of success, I have had the best results in the use of the sulphocarbolate of sodium, in doses of from two to four grains, in solution, for adults, with two or three drops of tincture of nux vomica, every six hours; at 6 and 12 o'clock; alternating with from two to four grains of cinchonidine, for adults; and proportional doses for children, according to the age; this too, dissolved or suspended in pure rain water; in typhoid or enteric fever, and all putrid, septic and contagious diseases.

This has been the general treatment; except such local measures as have been apparently indicated; as, warm foot-baths, sinapisms, warm toast-water and milk, only as a drink, and toast, egg or other plain food at meals; being kept out of bed, as far as safe days, to secure better rest at night. In all cases with a coated tongue, an improved cathartic pill at evening if constipated, or a grain leptandrin pill if not, till the coating is off.

For sore throat of diphtheria or scarlatina, etc., a dry flannel folded, is pinned around the neck, and a gargle of chloride of ammonium, about two drachms to eight ounces of water, with five drops of carbolic acid, early; and later, of eucalyptol, in a strong sage tea, with a drachm or two of alum and borax to half a pint, sweetened.

This general and local treatment has been modified, of course, to meet the indications in different diseases; and more or less in different conditions in the same form of disease; and, except the antiseptic, corresponds, very nearly, with the treatment I had followed, before I knew of, or used the sulphocarbolate of sodium, or other antiseptics, as such.

The average duration of typhoid or enteric fever, under my former treatment, was about twenty-one days, I think, with more or less complications; very few, if any cases, having been aborted, strictly speaking. Since using the antiseptic, in addition to what I did before; many cases seen early have appeared to be aborted; cases seen a trifle later, the microbial or other cause having poisoned the system more generally; and especially involved the intestinal glands, in congestion and incipient inflammation, the disease has generally developed no complications; the patients have

mostly been able to keep out of bed, days; and many of them to get about light business, in about a week. But cases first seen, at a much later stage; an incipient ulceration threatening; with, perhaps, cerebral meningeal inflammation, with the addition of a wet-cup to the back of the neck, my cases have been out in about two weeks, as nearly as I can calculate, as an average. Hence leaving out of the estimate, cases apparently aborted, which I think may have been about one-third, all seen early; taking the cases seen a little too late for abortion, getting out in about one week; and those seen later still, out in about two weeks, would make the average duration, since using antiseptics, about ten or eleven days, instead of the twenty-one days before I used them, with an otherwise similar treatment; thus cutting short the disease, about one-half, as nearly as I can estimate. And as nearly as I can estimate, my death rate has been less than one-half what it was before I used antiseptics; and confined mostly to cases far advanced, with either intestinal hemorrhage, or a wasting diarrhœa, with or without intestinal perforation. I should state, that in all cases, aborted or not, I have invariably continued the tonics to keep up the strength, and antiseptics to destroy the germinating spores, in gradually decreasing doses, for at least one week. For the spores cannot be destroyed before germinating, "their envelop or shell being the most resisting substance in the material world." (*See Ball, on Bacteriology.*)

Thus enough has been accomplished, to prove that the cause out of the way, there is not necessarily any self-limitation to the duration of typhoid or enteric fever; though the cause continuing to operate, the elimitation of the poison, with no complications, except intestinal, may usually require twenty-one days, perhaps.

My observations in the treatment of strictly *contagious diseases;* as diphtheria, scarlatina, rubeola, and all others, that I have treated, correspond very nearly with those above described in typhoid; several cases, under antiseptics, treated early having been apparently aborted; two at least of scarlatina; several of diphtheria, and some among the other diseases treated, as appeared. And, using antiseptics, with tonics, either instead of, or in addition to what I had formerly used, I am satisfied that the average duration of all contagious diseases treated by me, has been less than one-half what it was before I used antiseptics. The complications have been fewer, and the death-rate much lower, especially in diphtheria.

In view of the foregoing facts, in relation to typhoid or enteric fever, and all contagious diseases, that have fallen under my observation, I am thoroughly convinced, that none of them have necessarily, self-limitation, as was formerly supposed. And hence, if true, it evidently becomes our duty to treat the patients to *cure*, not merely to get them through an imaginary self-limited disease, as we formerly did, to some extent, because we did not know the cause, or how to destroy it, in any case, as we do, or should now.

And further, as all contagious diseases originated, at first, without an exposure to a person thus diseased, as we all know; there having been none other thus affected, in the first case; we have a right to infer, at least, that they now have a similar origin, as well as by contagion, from one to another person, in many cases; and especially does it appear to be the case in phthisis pulmonalis, now regarded as contagious. I fear this may be true, in all contagious diseases, to a far greater extent, than has formerly been supposed.

If so, this is important. For, in addition to our duty to abort, cut short, and cure disease, as best we can; and responsibility in protecting the well from exposure to contagion from those suffering with contagious disease; an even higher or broader responsibility devolves upon us, as special guardians of health, to impress upon those under our influence, to avoid all personal and general influences of an unsanitary character, liable to *produce*, as well as to predispose to contagious and all other diseased conditions.

818 Madison Street.

Chronic Gastritis—Resting a Plea for more Careful Consideration in the Diagnosis and Treatment of the Same by the General Practitioner.*

By Eugene R. Morris, M. D., Asheville, N. C.

I come before you this evening with nothing new or startling; no patent medicine like chionia, seng, &c., with which to work miraculous cures. It shall be my aim to suggest something practical in regard to the care and treatment of this class of cases, which are rather numerous, and ought to receive more consideration at our hands.

Chronic gastritis is common in people of 35 years and older. I shall say nothing of the pathology, except to state that the mucous membrane is constantly congested, causing changes in the gastric juice, in-

*Read before the Buncombe County Medical Society at regular meeting held February 6th, 1899.

creased secretion of thick alkaline mucous, diminished peristalsis of the stomach, all favoring fermentation and decomposition of the food, followed by symptoms of indigestion. The mucous membrane becomes hypertrophied from constant engorgement, infiltration of the peptic glands, followed by granular degeneration, and finally, atrophy of the cells.

The causes are too numerous to mention. Some of the most frequent are: Repeated attacks of acute gastritis, excessive use of alcoholics, tea, coffee, ice water freely during and after meals; irregularity of eating and imperfect mastication; bad and improperly prepared food; anæmia, malaria, excessive tobacco chewing; diseases of the heart, lungs and pleura, liver and kidneys, producing chronic congestion of all the stomachic vessels; cancer and other degenerative diseases of the stomach.

Bad hygiene, favoring repeated congestions of the mucous membrane, sudden checking of the cutaneous function, due to improper or insufficient clothing, poor ventilation and damp rooms are frequent causes.

With chronic gastritis we may have either a normal or slightly diminished quantity of acid, or with other changes in the secretions an excess of acid, followed by the atrophic form, which is simply the finale of either of the other forms.

Remembering certain facts we should not be surprised if our patients often complain more of symptoms referred to the heart, lungs, kidneys, or some other organ, than the stomach. Persistent indigestion, anorexia, tenderness and fullness over the epigastrium, nausea and occasional vomiting *after* food, coated tongue, obnoxious breath, thirst, constipation, scant, high colored urine, with excess of phosphates, urates, or oxilate of lime, weak circulation, insomnia, melancholia and stomachic vertigo. With hyper-acidity, we have in addition to the above named symptoms, acid eructations, known as "heart-burn" or pyrosis.

In those past middle life the atrophic stage usually begins, and once well advanced, the digestive function is much impaired, sometimes almost entirely lost, small quantities of liquid food causing pain and vomiting, followed by anæmia and progressive loss of weight and vitality.

A diagnosis of chronic gastritis can only be made by exclusion. Even by this method a diagnosis is often difficult or impossible, for the reason the symptoms may be confounded with those of gastric cancer, gastric ulcer, and gastric dilatation, diseases of the liver, kidneys, cardiac disease and cerebral vertigo, the symptoms of which are not always clear, and also because chronic gastritis is often associated with one or the other of these conditions.

The out-come of our cases is what most concerns us as practitioners. We do not expect complete recovery often, but with proper care, selected diet and mode of life, considerable amelioration of symptoms will follow, and the patient may live out a good life and die of some intercurrent trouble.

In the treatment the first important symptom indicated for correction is indigestion, which is usually the most noticeable and distressing; this indication is best met by throwing worry to the wind at meal hours, carefully regulating the quantity and character of food, which should be taken regularly and thoroughly masticated, avoiding starchy, fatty, saccharine, and all highly seasoned foods and stimulants.

An occasional case will take small quantities of wine kindly.

A milk diet is the ideal, but in most cases is best left off the first two or three weeks of treatment.

Where milk is not digested well it may be diluted one-third with soda or vichy water. Later on a little beef, eggs, oysters and ripe fruits are welcome.

Fresh air and exercise, short of exposure and fatigue, are essential.

Cold sponge baths, followed by brisk rubbing, improves the peripheral circulation and increases the tonicity of the skin.

Pleasant surroundings, a change of climate and associations are beneficial where the tendency is to mental despondency.

The medical treatment is divided into such measures as aim at replacing certain essential elements in the digestive fluids, and those that stimulate weakened glandular activity. In the former class are HCl and the ferments.

HCl is the most important and the most generally deficient ingredient of the gastric juice.

It is not only necessary for its action as an acid, but is essential to the conversion of pepsinogen into pepsin.

Ewald recommends large doses of the dilute acid—90 drops—after meals; while Leube and Reigel advise small doses, 10-20 drops.

I prefer the small doses to the large. It is only in selected cases that benefit will follow the administration of large or small doses, as in gastritis per se, any acid is a positive irritant to the inflamed mucous membrane.

Probably the best results are obtained from the judicious use of HCl in the atrophic and neurotic forms, while the bitter tonics act more effectually in other cases of chronic gastritis.

Of all the bitter tonics, strychnia in some form, stands at the head, and will prove the most satisfactory. It may act by influencing the appetite rather than stimulating the secretions of the stomach.

Alcohol and NaCl kindly influence digestion, proving good stomachics when properly used.

Alcohol in moderation is supposed by some to act by increasing acid in the gastric juice, and with it the pepsin, while others claim it is the motor instead of the secretory function stimulated by the alcohol. I maintain it is both. The importance of NaCl in gastric digestion is demonstrated from the fact that its presence is necessary to the production of HCl.

Hence, it is indicated in dyspepsia due to chronic gastritis with diminished acid secretion.

A carefully kept record of some chronic cases treated by the writer, shows all the bitter tonics, such as strychnia, columbo, gentian, quasia, ipecac, and condurango, used without any appreciable benefit.

Two patients, recently treated, had every thing to no advantage.

This might be accounted for on the grounds that they were both tubercular, and had no thought of their stomach trouble being influenced by this active process in the lung, for which they were taking no treatment except climate. When explained they did not seem to understand how it could be.

So much, gentlemen, for plenty of fresh air and fresh water internally, externally, and eternally, with proper food and *little* medicine.

I come now to the consideration of mechanical measures to stimulate glandular activity. I refer to stomach lavage or stomach washing.

I want to stick a pin here and state positively this very valuable method should be used more extensively by the general practitioner. Because it may have been abused by some enthusiast is no reason why we should not employ it in selected cases, especially where there is a profuse secretion of tenacious mucous coming from the stomach. Luke-warm water may be used, but if there is much thick mucous, a 1 per cent salt solution, or 3 per cent. solution of bicarb. soda is preferable.

With fermentation a 3 per cent. boric acid solution acts beautifully.

Elect morning, on an empty stomach, except when there is nocturnal disturbance with flatulency, when it should be practiced three or four hours after the last meal.

Lavage may be repeated once a day, unless the patient be delicate, when every second or third day will be often enough. Continue till the fluid comes back clear, remembering it is not necessary that all the fluid be removed after the washing.

Remember *not* to use *nasty oils* on the tube, but warm water or sweet milk, having the patient swallow as you gently manipulate the tube, and it slips comfortably down home.

If the patient will not submit to lavage, the next best thing is to order one-half to one pint of *hot water* taken slowly one hour *before* meals.

Alkaline drinks may be used beneficially. A class of cases are benefited by the free use of the different mineral waters.

Special conditions, such as flatulency, vomiting and constipation should receive proper treatment.

In conclusion, let me say, that in chronic pulmonary tuberculosis the first symptoms may be those of chronic gastric troubles. The local gastric symptoms may be so marked that chronic gastritis is easily diagnosed without considering the possibility of tuberculosis.

Let us be careful, therefore, not to make this mistake where there is chronic gastric trouble associated with anæmia and progressive loss of weight and strength, for it may mean the initial stage of chronic phthisis.

DISCUSSION.

DR. PUREFOY.—It is customary to say something complimentary in reference to the paper, but I will not say that to-night if it is the custom. The only thing that I could add to the paper is this, The subject is a trite one, the disease is exceedingly common, probably because we are faulty in our methods of diagnosis. One of the first things to do in gastritis is to find out whether it be primary or whether it is secondary. Suppose we have a case of chronic gastritis. Then the question arises, what variety of the disease is it. It is absolutely necessary to make a clear-cut diagnosis as to the variety of the disease with which we are contending lest we will not be able to apply intelligently our therapeutics. It is not necessary here to go over the methods of diagnosis. I might briefly say that we resort to the stomach pump, for instance before breakfast to find just what there is in the stomach, then probably five or six hours before eating on another day we resort to the stomach pump and examine the contents of the stomach to see just what we have. Often we want to know whether there is an excess or deficiency of acid, in other words, we want to examine the contents of the stomach to get a fine-cut diagnosis if

possible, and our treatment depends largely upon the diagnosis. It is hardly worth while to discuss the treatment. The doctor covered that pretty thoroughly. If I had a criticism it would be this, and it is a criticism you can apply to almost every textbook, and that is that we do not find those nice divisions. For instance, we find in the books that ipecac and the salines, etc., are first-class remedies for dysentery. We want to know what stage to give those, we want to know when to do this and the other. The doctor is not to be criticised. This paper has been written very hurriedly, I know that, but in the treatment of these things, we must get that thing down, and we do not know just how to treat. Sometimes I give a little phosphate of soda and a glass of hot water before breakfast. Now I believe that we have very few remedies that are specially serviceable. Take the mucous form, after the stomach has been thoroughly cleansed. I believe in the use of nitrate of silver, either in the pill form, or preferably in solution, one-half or one-fourth grain to the ounce, put into the stomach after the mucous has been washed away.

There is only one other point I wish to make, and that is the indiscriminate use of pepsin. There is only one form of the disease in which I believe pepsin is worth anything. I believe there is more pepsin used by the profession than almost any other remedy we have—I don't know of another that is more so. It is only probably in one form of that disease where pepsin would be specially advisable. I believe, too, that we make another mistake. The hydrochloric acid ought to be given after meals, one dose, and then often where there is that deficiency we need to repeat in an hour or two hours. I think that the paper is a good one, and the subject one that we need to discuss more and study more.

Dr. Sawyer.—I would like to say that I am very much interested in this subject, because I myself suffer from gastritis in a mild form. I eat too much and too quickly. I have made quite a study of it myself, and I find that Dr. Purefoy is very nearly right in what he says. There is no disease which is so ill-treated as gastritis. A man comes to you and says he has indigestion. Ten to one you will give him pepsin, or it may be rhubarb, and tell him to report to you in a few days. There is nothing so essential as to make an accurate diagnosis, not only the condition of the stomach and the organs, but also the cause of that condition, and this has to be looked into and regulated first, and then the condition itself must be treated. When we have thoroughly mastered the diagnosis, and know precisely what is the matter with the patient, then we can know what we are doing and can do it in a scientific way and get good results, but unless we do so we certainly cannot.

Dr. S. W. Battle.—I wish to add one word in regard to the treatment. Lots of people who eat too much and have any amount of discomfort have no inflammatory process going on in the mucous membrane of the stomach. In regard to the treatment the doctor did leave out one remedy which has been of great service to me, hydrastis. I believe hydrastis is one of the best remedies for catarrhs of the mucous membrane and along the alimentary tract especially. I have had more satisfaction from giving fluid extract of hydrastis before meals in good big doses, from one-half to one teaspoonful, than any one single remedy. Along with it I have found that H_2O_2 peroxide of hygrogen is a capital thing. We all know the effect of H_2O_2 on mucous, how it seems to destroy it and carry it away from the stomach, and I have recommended H_2O_2, a teaspoonful or so of peroxide of hydrogen and hydrastis taken a half hour before breakfast in warm water. If you cannot take as much as that at first, try a little less, and follow along that line. I have used hydroguret, which is peroxide of hydrogen, only it has more volume of oxygen than the peroxide as we see it. I would like to hear some of the members on that point.

Dr. Ambler.—I believe I was dubbed about a year ago the washwoman of the Society. I think my mantle will fall on Dr. Morris now. I read a paper here on the voice some time ago, and I am pleased to see Dr. Morris is working on the same lines. He has stated that diagnosis of stomach troubles is the most important part, and I believe that in the stomach we have our most successful means of arriving at a diagnosis. I was a little suprised to hear him say that three or four hours after a meal he used the tube to see what had become of the meal. It has been my experience of giving a test breakfast of a roll and milk, at least four hours must elapse. If you give the patient a hearty meal and attempt to use a stomach tube after three or four hours you will very often get into trouble. An ordinary meal requires four or five hours in order to be digested. In these catarrhal conditions I think the doctor is perfectly right in using the tube before breakfast to find out if there is an accumulation of mucous in the stomach. I do not believe the doctor has gone into the lactic juices as closely as might be. With a little

care and a little patience there is no trouble in the use of the stomach tube. Another thing is the use of the stomach bucket for diagnosis. I think that was first brought out by Ewald? Almost any patient can swallow a good sized capsule, and if that capsule has a silk thread fastened to it, that cuts no figure, and I find that there is almost no discomfort in the swallowing of the stomach bucket. This bucket is simply withdrawn by the thread, and is a very satisfactory method. As to the frequency of the washings, I would differ from the doctor somewhat. I believe that in aggravated cases the washings should be repeated at first daily, and the patient in the mean time put upon the most restricted diet, and experiment and see what he digests and what he does not digest. If you are not going to keep a record of what he eats and what he does with it you are not going to know how to feed him after you know what the trouble is. I think that is one of the most important points, therefore I always have him write down exactly what he eats, and in using the tube I always make a note under that of what I found, and in following up the case in that way it is one of the best methods we have in our hands. In regard to medication, I am not much of a believer in it. I believe the majority of cases are due to overindulgence, and the treatment of the case becomes one of diet and the exclusion of certain things. It is not a question of medication, but of common sense. I confess that in my hands medication and the stomach have not been very successful, but I believe I have been fairly successful in my cases.

I believe the doctor is right about the tubercular cases, and a great number of our tubercular patients have preceding the tubercular state a state of gastric irritation.

Dr. Chapman.—I quite agree with Dr. Morris and Dr. Ambler about the stomach tube. I find it quite as efficient as anything I have ever used, but on one point I differ a little. I have often used what is known as Ewald's test breakfast, consisting of a roll and of a cup of tea, but I frequently wash it out in two hours to see what has been done with it. I believe that the various drugs may some times be used to advantage. As to washing the stomach, I very often have used as a last washing a solution of fluid extract of hydrastis, but I simply used that to wash, and remove as much as I can. Another point brought out is the influence of tuberculosis on chronic gastritis. It is easy to see why we have chronic gastritis. This condition very often continues for years. The blood cannot get to the stomach. It is a common thing to see a case of chronic gastritis which has received no treatment, but attendant pulmonary conditions being actively and successfully treated.

Dr Morris.—I wish to thank the gentlemen very much for their discussion, and some who have discussed the paper have brought out the weak points, which I expected them to do, and have enlarged on it, for which I am very grateful to them.

Dr. Ambler and myself, I think, differ very little, if any at all. I did not advise the use of the tube in my paper, three or four hours after eating for the purpose alone of finding out what was going on in the stomach, but where a condition of flatulency, pain and distress occurred, to give the patient rest it might be used. Of course we use the tube to determine the condition of the stomach. As to the daily use of the tube, I suggested that it might be used except with weak patients, debilitated patients or very delicate patients who could not submit to the use of the tube every day. If your patient is in condition to use the tube every day I would do so until I had finished the use of the tube. As to the question of the time of digestion taking place, I don't believe it occurs in four hours. What I wanted to do in this paper was simply to call attention to the fact that we are very careless and negligent in treating stomach troubles. I believe we give it less attention than any other trouble we have as much of. Another thing is the medication—the use of drugs in these stomach troubles. What I want to do is to look after these troubles properly, giving as little medicine as we can, and regulate the patients eating, and their mode of living and their clothing and their drinking, which will give us far better results than so much medicine. The next point I wanted to encourage was the use of the stomach tube, and as Dr. Ambler says, this is not difficult in most cases. If you simply ask your patient to open his mouth and take the tube and do not instruct him how to take it, you have two forces, one acting against the other. Of course, the tube is forced back when you are forcing it down. You will never succeed in that way. The only point I want to impress is to *not* use oils. Use the tube very gently, and instruct your patient what you want to do and in most cases you will succeed. Another point I simply mentioned for the doctors to bring out was that of differentiation of lung troubles when associated with these stomach troubles.

Tuberculosis—Prevention and Treatment, with Some Personal Observations on the use of Anti-Tubercle Serum.*

By A. E. Powell, M. D., Marion, Ind.

In presenting this paper on a subject of such great importance, I cannot hope to add much that is new to the sum of knowledge upon the subject. However, a new grouping of facts and a fresh presentation may be all that is needed to stimulate discussion and facilitate the exchange of ideas and experiences.

We are greatly alarmed when we are told by the daily press that our country is liable to an invasion of yellow fever, cholera, or smallpox. We spend great sums of money annually and tax human ingenuity to invent new methods of protecting ourselves from these dreaded diseases. We think nothing of quarantining a ship-load of foreigners until we are satisfied that they will not develop any contagious disease, and if people of our own nationality happen to be among them, they are not excepted. Many civilized States have enacted compulsory vaccination laws, in their efforts to prevent the introduction or spread of smallpox, and nearly every State in the Union has on its statute books more or less stringent laws for the protection of its citizens from diphtheria, scarlet fever, typhoid fever, etc., yet we pay practically no attention to the spread of tuberculosis in the human race every year.

We are inconsistent and, more than that, almost criminal in our neglect of proper precautions to prevent the spread of this disease. We should turn our attention to this matter and not rest until we have secured the enactment of laws requiring at least the precautions that we enforce in typhoid fever, to be insisted upon by our boards of health, in all cases of tuberculosis, as regards the disposal of excrements infected with the disease.

When, in 1882, Robert Koch announced his discovery that tuberculosis was caused by a pathogenic micro-organism, the bacillus tuberculosis, he placed in our hands information of the utmost importance in the prevention and treatment of this disease.

The fact that tuberculosis is a contagious disease, every case acquiring its infection from a previous case either human or animal, is now an established fact, after years of discussion pro and con.

It would require too much time for me to even attempt to enumerate in a paper like this, all the means by which the tubercle bacilli is conveyed from one individual to another; suffice it to mention a few. (a) Dust infected by sputum of consumptives; (b) infected meat and milk; (c) infected domestic animals or birds; (d) infected clothing or instruments; (e) intimate association with those affected.

Dust as a source of infection is most to be feared in dwellings which have been for a long time occupied by those suffering from this disease, especially among the poorer classes where the surroundings are frequently unhygienic and often filthy, patients expectorating on walls, carpet or floor indiscriminately. Dust from the street no doubt often contains tubercle bacilli, but as it has been exposed to the bactericidal action of sunlight and fresh air, it can not be as dangerous as dust from any confined space. Recently while examining an applicant for life insurance I discovered him to be suffering from incipient tuberculosis of the lungs. On questioning him I found that his business was that of a laborer in a pulp-mill where he was compelled to sort waste paper previous to its reduction to pulp. This paper, he said, was frequently dusty and very often in a filthy condition, and there is no doubt that his disease was acquired from infected dust, which he breathed while sorting filthy paper.

Infected meat or milk are both a source of danger, milk being the most liable to cause the disease, from the fact that it is often the sole food for several years of infant life. Many kinds of cattle bred with the sole object of securing a breed that will produce the most milk, are so feeble that when kept in unhygienic surroundings, such as damp, ill-ventilated stables with little or no light, they readily become tuberculous. Many families depend for their milk supply on some such single animal where they would be far safer to buy the mixed milk sold by any reputable milkman.

Birds readily acquire tuberculosis, cats have often been demonstrated to be carriers of Diphtheria, and there are cases of pneumonia on record that have been acquired from parrots kept as pets; why, therefore, may not these animals be conveyors of tuberculosis. At least it seems a safe precaution to prevent children from "kissing" the pretty birds or animals which are so often given them for playthings, or to see that they do not occupy the same bed at any time.

There are cases on record where tuberculosis has been conveyed to a healthy subject by infection from the washing of handkerchiefs soiled with the sputum of a consumptive relative.

*Read before the meeting of the Indiana State Medical Society at Layfayette, Ind., May, 1899.

Instruments or dressings used in operations or after treatment of tuberculous cases are often as dangerous sources of infection as those used on cases of septic infection.

How to control intimate personal contact between tuberculous individuals and those who are not affected, especially when members of the same family, is one of the most delicate and perplexing questions that the physician is called upon to meet. May a tuberculous mother nurse her child? How shall we prevent other members of the family or servants who may he infected from kissing and fondling children? What is the amount of danger from sexual contact between those sound and those affected? These and many other questions have to be answered by the conscientious physician. They may appear trival, but great results often hang on the way in which they are answered.

The heredity of tuberculosis is a question that after much discussion has been pretty well decided in the negative; while there may be a few cases that are directly inherited, by the transmission of the germs of the disease through the placental circulation, or by infected seminal fluid, nearly all cases are acquired by some of the means mentioned above. In many instances several persons may be exposed to infection, and of the number only one or two acquire the disease. In this the inherited tendency to the disease no doubt plays a prominent part, the person affected having had a weak constitution and less powers of resistance from the beginning, while his stronger neighbors escape.

The identification of tuberculosis in its incipiency is second only to proper methods of treatment; for, in order to treat the disease with any hope of success, it is absolutely necessary that a correct diagnosis be made at the earliest possible moment. Many cases are not seen by the physician until the tuberculous process is well established, and in this class of cases the fever, cough, etc., are so marked that no special skill is needed to recognize the character of the complaint.

At a very early stage the physical evidences are so slight that they may be easily overlooked or disregarded. In order to arrive at a correct diagnosis the clinical picture of an incipient case must be considered as a whole, without placing too much stress on the presence or absence of single symptoms which are supposed to be characteristic.

The presence of a cough in a given case is not positive evidence of the presence of the disease; neither is its absence to be implicitly relied upon as an indication of death. A case subject to paroxysms of coughing in the morning or evening should be looked upon with suspicion if the cough lasts for more than three weeks.

Hemorrhage is also among the very early symptoms in some cases; it is alarming to the patient, and even slight hemorrhages should be investigated carefully. Hemoptysis in a person otherwise apparently healthy is positive evidence of tuberculosis.

One of the earliest symptoms is fever; this is usually so slight that it is easily overlooked unless the patient is kept under observation for several days. A good plan is to take the temperature at 8 a.m., 12 m., 4 p. m. and 8 p. m. for three or four days in succession. If a tuberculosis process be going on in the lungs there will be found in nearly all cases a slight rise of temperature, from .1 to 2 deg. F. This rise is not present every day and is not always alike; it is usually increased by exertion, which also gives rise in many cases to dyspnoea and palpitation. The pulse rate is always increased in the early stages of this disease, even if the patient be quiet.

These manifestations are the results of ptomaine absorption and this should be borne in mind when investigating a suspicious case, hence malaise, anorexia, heavy urine with traces of albumen, enlarged glands are, with other symptoms of toxemia, valuable aids to forming a correct conclusion.

Positive and unmistakable evidence of the presence of consumption in a given case is the presence of the specific germ in the sputum. Unfortunately it often happens that at the stage of which we are speaking no sputum can be obtained, or if obtained it does not contain any bacilli. It is well in collecting sputum that the physician should be sure that the sputum comes from the respiratory tract; that which is raised by coughing in the morning is preferable. If the quantity is small and ordinary methods do not reveal the germ, the sputum should be boiled with twice its quantity of water, containing in solution a small amount of Na OH, evaporated to a small amount and then precipitated either by standing or by the use of a centrifuge. Failure to find the germ is not positive evidence of the benign nature of the case.

When Koch's tuberculin was first used it was found that, following the injection of the remedy, about twenty-four hours, a more or less severe reaction took place, consisting of a chill, followed by a temperature of 101 to 103 F., with malaise, aching in the bones, etc., which after a few hours passed away, leaving the patient in the ordinary condition.

This characteristic reaction has been utilized, first as a test for the presence of tuberculosis in cattle and lately in the human subject. In a suspected case a first dose of .005 (1 mg.) is given, and if this is followed by no reaction the next day, upon the third day a dose of .01 (1 cg.) is given; if there is still no reaction upon the fifth day, a third dose of .02 (2 cg.) is given. The absence of any reaction after three injections positively excludes the presence of tuberculosis in the case tested.

This method of diagnosis permits us to discover the disease in those cases where its presence could not otherwise be demonstrated.

It has been objected to on the ground that it causes a dissemination of tuberculous material, one observer going so far as to say that where tuberculine had been used, 41% of cases showed miliary tubercules at post mortem, where only 6% were affected in this manner of those not injected with tuberculin. The investigations of Guttman and Ehrlich, in Germany, and of Trudeau, Denison, Klebs and Whittaker, of America, give evidence to the contrary, however. The bad results sometimes seen are due to the use of too large doses, or to the use of tuberculin in well developed cases of the disease, where large areas of lung are affected.

The experience of physicians with the treatment of Tuberculosis in the past has been unfortunate, which no doubt accounts for the pessimistic attitude of the profession to-day.

No one line of treatment will be suitable for all cases of this disease. We must take into consideration the age, duration of the disease, physical resistance, power of recuperation, together with the family and personal history. Those cases in which the patients have acquired the disease, not having an inherited tendency from tuberculous ancestors, but, becoming infected in later life, are usually more amenable to treatment than those with a bad family history. The various complications of each case should be carefully studied in order that the treatment may be adapted to the individual case.

The primary essentials are proper nourishment, even temperature and pure air. By proper nourishment I mean such food as will be easiest digested and furnish most energy to the body. Nearly every patient suffering with this disease sooner or later becomes a dyspeptic.

For this reason the greatest attention should be paid to the digestive apparatus, as upon the degree of its effectiveness depends the success or failure of any line of treatment. Each patient must be nourished according to his or her individual requirements. In a general way, broiled steak or roast beef, medium rare done; lamb, mutton, eggs, fish, beef broth, oyster broth, clam broth, milk, cream, bread, with small quantities of vegetables that do not disagree should be the staple articles of food.

Fried foods, pastry and sweetmeats are not desirable articles of food for consumptive patients. Fruits are valuable, but should not be eaten to the exclusion of more nourishing articles of food.

The whites of one to three eggs may be beaten and mixed with a glass of milk or cream and given to weak patients two or three times a day. Cream has a fat as good as cod-liver oil and more palatable.

Pure, fresh air is of the greatest importance in these cases; and if the patient is too weak to go about it should be secured by ventilation. The chief value of climatic treatment is the fact that the air of some places contains more ozone and less moisture than others.

In patients too weak to take much exercise the judicious use of massage, using some of the vegetable oils as a lubricant, and following the massage by a salt rub, with brisk friction with a dry towel, is very beneficial.

In the climatic treatment of this disease there is room for a great deal of improvement. To send a patient hastily away thousands of miles from friends, as soon as a diagnosis of tuberculosis is made and without due consideration of his case or the climate that he may find, is a procedure that causes a wanton waste of money and life, and needless sorrow to friends. Not only must the best climate for a particular case be selected, but the patient should be directed to visit some reputable practitioner when he reaches the end of his journey and place himself under his care. This will prevent many mistakes which so often discourage the patient and either hasten his decline or send him home disgusted with the whole affair. "Fresh air, fresh air, fresh air," should be endlessly preached to these people. This can be obtained as well in Indiana as in California. Fresh air and sunshine are natures own remedies for the treatment of this disease, and if the patient goes to a tourist's hotel and shuts himself up instead of getting out of doors he is worse off than he would be at home. I believe the only climate of much value is the dry, moderately elevated region of western Texas and portions of New Mexico. The patient should be instructed to live out of doors as much as he possibly can, even in this climate.

Climatic treatment is most valuable in the

very earliest stage of the disease, and the patient should be cautioned against returning to a damp climate too soon. It is much better for them to remain permanently in a climate that is suited to their condition.

In treating these cases, like others, I have tried many remedies. I prefer some preparation containing codeine for the cough and strychnia for its tonic effects, combined as the needs of the case seem to indicate with other general tonics. Diarrhœa resulting from dyspepsia is best controlled by some digestive agent, such as peptonzyme or taka-diastase. Lately I have seen good results from a preparation known as a synthetic cod-liver oil. It seems to be well borne by patients when other food is rejected. The needs of every case should be studied and treatment instituted in accordance wsth the indications of the various complications.

Ever since the introduction of antitoxins into the treatment of disease, it was hoped that the principle could be applied to the treatment of tuberculosis. Matagliano, in Italy, first used the natural blood serum of the ass, and in 1885 and '86 he reported some of the results of his experimentation with the blood of this animal. In his experiments the animals were treated to increase their resistance to the disease. Before this time, Richet, Hericourt and others in Europe had used the blood serum of the dog in similar experiments.

Dr. Paul Paquin, of St. Louis, Mo., made the first reports of the results of patients treated by serum from the blood of immunized horses in December, 1894, and in January, 1895. Since that time a number of men have used this form of treatment in tubercular troubles in almost every part of the civilized world. This form of treatment seems to come the nearest to the natural method of treatment of disease. When a poisonous material is thrown into the system of an animal the body reacts against it, and after a time the original dose many times multiplied can be given with impunity to the animal that at the beginning would easily have been destroyed by such a dose.

This condition of the animal economy is known as "immunity," and the process of treatment that the animal undergoes to reach this condition is called "Immunization." Blood serum taken from an animal that is immune to a certain toxin and injected into one that is not will protect it against an otherwise fatal dose of the toxin for which animal No. 1 has been immunized, but not against another poison.

For this reason it becomes necessary to use different animals to produce different antitoxins or serums, as diphtheria antitoxin would not protect against tuberculosis, nor tetanus antitoxin against diphtheria.

It has been found that the tubercle bacillus contains in its substance several deadly toxins aside from those that it forms during its growth in cultures. These toxins can not very well be isolated and used alone, so it becomes necessary in order to secure a high state of immuniration to inject the substance of the germs themselves into the animal being treated. A mixture of pulverized germ substance and tuberculin is injected into a horse in doses of 1 c.c. to 30 c.c. daily for several months, and then, after a period of rest to allow all of the toxins to be excreted from the system, blood is drawn from the animal and the serum used in treatment of human tuberculosis. The aim of this form of treatment is to neutralize the effect of tubercle toxin present in the system, stop the growth of the germs or modify their virulence and to supplement the natural antitoxic powers of the system and greatly increase them, thus aiding natures natural recuperative powers to throw off the disease. Its effectiveness can be greatly increased by attention to the surroundings of the patient and the proper treatment of any complication that may be present. As in diphtheria and other diseases treated by this method (antitoxins), the wise physician will not fail to assist the system of his patient in every way possible, by proper food, fresh air, attention to digestion, etc., to throw off the disease. I wish to report briefly a few cases that have fallen under my observation, and which have been treated with antitubercle serum made by the Paul Paquin Laboratories, at St. Louis, Mo.

Case I.—Male, American, aged 28, married, horse trainer. Family history good. Personal history up to previous autumn, four months before, good. At that time he suffered an attack of la grippe, and from that time a rapid decline ensued Physical examination showed both lungs. seriously involved, having cavities and much tubercular infiltration. Sputum was abundant, and contained many bacilli. He suffered dyspnoea on slight exertion and had frequent streaks of blood in the sputum. Diagnosis, pulmonary tuberculosis, second stage.

He was given antitubercle serum by another pyhsician for about two months, and under its use showed marked improvement, gained several pounds in body weight, and showing a general improvement. His case was brought to a fatal termination before it could be decided how much improvement he would eventually make, by expo-

sure to a rain, which caused a sudden exacerbation of the disease, and death.

Case II.—Male, American, aged 25, married, physician. Family history negative. Personal history, good up to two years before, when he suffered from a severe attack of la grippe. After having had la grippe, he had several hemorrhages from time to time, with slight occasional rises of temperature. Attention was first called to his lungs by an examination for life insurance shortly after, which showed considerable infiltration of the lower rear portion of the left lung.

At this time he was in ill health, but with no especial symptoms pointing to pulmonary tuberculosis. These, however, developed later. An examination at this time showed tubercles scattered through both lungs, with several cavities in the anterior portion of the upper lobe of the left lung. Tubercle bacilli in the sputum, chills, fever, hemorrhages and rapid decline called for immediate attention. The diagnosis was plain.

He was treated with serum injections for about three months nearly every day. Chills and fever disappeared almost entirely during the first month, appetite increased, expectoration diminished, hemorrhages became less frequent, and the cough finally disappeared. Now, about three years after taking treatment, his health is good and he does his ordinary work of general practice. All signs of tuberculosis, as far as external appearances are concerned, have disappeared.

Case III.—Male, American, aged 35, glass-blower, married. Suffered from pulmonary tuberculosis for six months before I saw him. Both lungs contained large cavitives, and he had profuse expectoration, containing many bacilli. Treated with serum daily for one month with only very slight improvement. Died.

Case IV.—Female, white, American, single, aged 24. Family history bad. I had no opportunity to make a physical examination in this case, but she undoubtedly had cavities of considerable size, as she had quite a large amount of muco-purulent sputum that contained large numbers of the tubercle bacilli, with chills, fever and other symptoms of secondary infection. She was given the serum for about six months, and at the last time I heard from her she wrote that she had gained her normal weight and that her friends considered her well. She still, however, had some cough and expectoration. This was two years after she had taken the treatment.

Case V.—Female, white, American, aged 22, single, nurse in sanitarium. Seen in consultation after return to her home. Family history good. Personal history good up to the time of her illness. Had been ill two months. Physical examination showed much infiltration of the lung tissue and several cavities in the right lung. She had chills, fever and was very weak. Tubercle bacilli were present in the sputum in large numbers. She was treated by serum for several weeks with no results, and after lingering for a few months succumbed to the disease.

Case VI.—Female, white, American, married, aged 47, house-keeper. Family history bad. All of the family on her mother's side had died with tuberculosis, her own sisters and several of her children. Had been ill one year. Both lungs badly affected. Many bacilli in the sputum. Chills and fever present every day. Severe cough. Treated with serum for three months. No improvement.

Case VII.—Female, American, white, single, house-keeper. Good family history. Had been ill two years; before that her health had been fair. Started with la grippe. She had severe cough, with quite a good deal of expectoration, fever and occasional chills. Occasional streaks of blood in the sputum. Left lung mostly involved, with a large cavity. Bacilli present. Treated for two months with serum; slight improvement in weight and other symptoms modified, but no benefit of any moment obtained.

Case VIII.—Male, American, white, single. book-keeper. Family history bad. Mother and three aunts had died of consumption. Personal history good up to three years ago, when he had an attack of what he called la grippe; since that time he had been ill several times with what he had pronounced the same disorder, but his lungs seemed to be chiefly affected each time. Had one severe hemorrhage and several times noticed blood in his sputum. Coughed at night and morning, and had a small amount of sputum, but little pus. Physical examination showed the lower rear portions of both lungs to be most affected; no cavities of any size or much consolidation present. Treated with serum for about two months, when he felt so well that he stopped taking injections in spite of the fact that he was told that he could hardly be cured in so brief a length of time. Cough and expectoration disappeared and he gained about ten pounds in weight.

Other cases might be cited, but I have not space in this paper to give more. These are sufficient to point out some of the conclusions which follow at the end of this paper These cases were mostly treated by

serum alone, without the aid of other remedies. I think every one finds it hard to treat advanced cases in ordinary practice as successfully as in sanitaria, where baths, massage, proper diet, etc., can be secured. By this I mean cases in the second and third stages, where they can get around with difficulty. Exercise in the open air with a proper diet are two invaluable adjuncts to the treatment of this disease, and these are often hard to secure, the first on account of the aversion of the patient to exercise, and the second on account of his friends to cooking food out of the ordinary methods.

I wish to call attention to the fact that no great benefit was derived from serum treatment in cases where there is a bad family history, coupled with a disease of two or three years' standing. The cases which received the most benefit were those that received treatment early in the course of the disease before there was much weakening of the system by absorption of septic material.

Antitubercle serum seems to exert a decided antitoxic effect that can not be obtained from any other remedy. This is noticeable in its effects on the chills and fever in many cases, especially where they are not of long standing. In old cases there is such a profound poisoning from prolonged secondary infection that it is hard to get any reaction, yet I have seen some of these cases that were greatly benefited by it. With proper precautions it never gives rise to serious trouble. I have never seen an abscess produced by its use or anything like one. The chief trouble I have experienced is from an urticaria that usually appears three or four days after its use is begun, but yields readily on stopping the injections for a day or two and giving laxatives and diuretics. It never occurs again in the same patient. If injections are painful when given hypodermically, it can be given by the rectum, by a syringe that has been specially devised for that purpose. There are usually no skin troubles following its use per rectum.

In giving remedies of this description we must be on the lookout for peculiar idiosyncracies of those treated. Some patients are very nervous, and the use of a spray of ethyl-chloride before making the injection under the skin of the back will be a valuable procedure.

In female patients it is a great bother to get at the proper place to make the injection in the back on account of clothing. I have found that if the patient wears a loose outer garment, and has the underclothing cut down the back, and supplied with buttons and buttonholes it greatly facilitates matters, and adds to the comfort of the patient.

Injections are usually given at about 10 minims at the start, gradually increasing the dose so that at the end of a week 30 to 40 minims are given every day, using the skin under the right shoulder blade on one day, and that of the other side upon the next, and so on.

Once or twice, I have had patients faint, becoming very cyanotic after giving an injection. In such cases I give whiskey, and strychnia hypodermically, allowing them to rest for a time before standing or sitting erect. The attack usually passes off in a few minutes, and seldom occurs twice in the same patient. This is not due to the serum, per se, as the same condition may follow an injection of water.

All hypodermics, needles, etc., should be kept as clean as possible and washed out with sterile water after each patient is treated.

It is well to disinfect the skin before the injection is made with a mild antiseptic, such as listerine, borolyptol or euthymol, or a 3 to 4 per cent. solution of carbolic acid may be used.

To conclude: Tuberculosis is an infectious disease whose ravages could be controlled and the disease finally exterminated by improved sanitary regulations, both public and private. It should be the endeavor of the medical profession toeducate the public to this end.

The majority of cases, if detected in their incipiency, are curable. This calls for more accurate and careful methods of diagnosis.

Antitubercle serum is a valuable agent in the treatment of this disease, especially in early cases, and is worthy of a careful trial. In cases treated with it we should endeavor to place the patient in the most favorable attitude by proper attention to the complications of his case and to his surroundings- By so doing we will get the best results.

Treatment of Eclampsia.*

By Louis D. Barbot, M. D., Charleston, S. C.

For the treatment of Eclampsia there is no specific.

Each case that presents itself must be more or less a law unto itself. Possibly, the best rule would be to forget all theories and to use those remedies which your experience has proven most valuable. Our

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method of treatment must vary according to circumstances. I make this assertion knowing there are eminent authorities who are wedded to this or that line of treatment in almost every case that presents itself. A Gooch will tell you "to take care of the convulsions and let the uterus take care of itself."

A. Duhrssen does not shrink from ending the pregnancy, even when the child is not viable, overcoming all obstacles, incising cervix, perinæum and vulva, to insure rapid delivery. The great divergent views of treatment are to be accounted for by the obscurity of the pathogenesis of the disease.

It is not the province of this paper to enter into a discussion of the etiology of eclampsia with its many theories, however interesting and enticing this field may be; yet, to discuss intelligently the treatment of any disease, we must consider its cause. To my mind, eclampsia is dependent upon a toxæmia, due to an over-production of toxins and an under-elimination by the emunctories. This theory is sustained by the clinical history of the disease and by post-mortem appearances. It is further sustained by the investigation of Bouchard, who has proven that the toxicity of the urine is greatly lessened in the eclamptic, whilst that of the blood serum is notably increased.

My views regarding the treatment of eclampsia, therefore, will be based upon this theory.

The treatment of eclampsia is either prophylactic or curative. The prophylactic treatment is called for by those precursory phenomena which we should ever be on the lookout for in the pregnant woman, namely—excessive nausea and vomiting, albuminuria with casts, edema, headache, mental disturbance, obscurity of vision, ringing in the ears, great restlessness, epigastric pain and lumbago.

If these symptoms are present to any great extent, convulsions will surely ensue, unless the proper means are taken to avert them. Considering the etiology, we readily find the requisite means. They consist mainly in securing free action of the skin, bowels and kidneys. All the emunctories must be opened. For the skin, I would recommend a hot bath, daily, at a temperature of 100 deg. F. for fifteen minutes. For the kidneys I would give the alkaline mineral waters freely, with 1-100 gr. of nitro-glycerine three times a day.

Vinay speaks highly of chloral. He refers to a primigravida, having, at the end of the eighth month, twenty-two grams of dried albumen in the urine in twenty-four hours, who took, during the ninth month, one hundred and twenty grams of chloral, or four grams per day. Patient had no convulsions, and was delivered of a living child at term.

For the bowels we should have free catharsis by the extracts of aloes and colocynth. In addition to the above we should insist on a strict milk diet. Milk is "a complete aliment, reconstituant, and is usually digested more easily and quickly than any other"; and, besides, as Riviere suggests, does not leave a toxic residue in the intestines which may be absorbed, and from the blood pass to the kidneys.

I do not approve of the induction of premature labor as a prophylactic measure, under any circumstances, as less than six per cent. of those showing premonitory symptoms develop the disease.

The curative treatment may be either medical, obstetrical or surgical.

Given a case of puerperal convulsions, it would be well to remember the observation of Vinay, "that there are maglignant cases of eclampsia in which death is inevitable, all means of cure failing."

The first thing to be done is to see that the patient does not harm herself; a napkin should be inserted between the jaws to keep her from protruding her tongue and biting it; her clothing should be loose; her movements should not be restrained except to keep her from falling out of bed. Draw forward the tongue if it falls back after a convulsion, arresting respiration; cleanse the pharynx of secretions by means of a sponge in a holder, lest the patient die afterwards of what our German friends call schluckpneumonien or deglutition pnemonia.

As soon as possible administer chloroform by inhalation to control the convulsions and give us time to make our preparations for the further management of the case.

Remembering the etiology of the disease we should stimulate all the emunctories at once to action; and what should be done needs to be done quickly. A drop or two of croton oil placed upon the tongue will prove most efficacious in relieving the bowels and depleting the system. We have not the time for any drug that acts more slowly; copious rectal injections of a hot saline solution will also prove efficacious and will prepare the rectum for tbe administration of drugs. Next, I would wrap the patient in three or four blankets, wrung out in very hot water, and cover with dry blankets to produce thorough diaphoresis; then, I would place an ice cap to her head to prevent congestion of the brain.

The advisability of blood-letting is a

much mooted question. In former times it was the favorite remedy in the hands of all practitioners. Now it is but seldom used. Winckel, Martin, and the profession generally, condemn it; but Kaltenbach says wisely, that in strong plethoric women with great cyanosis, bleeding has immediately a favorable effect. It removes instantly a certain amount of toxic material from the system and relieves renal and cerebral congestion, and diminishes bronchial and salivary secretions. To bleed, or not to bleed, must be determined by the individual case, and such cases are, I believe, very few and far between, particularly as we have other means now of depleting the system without robbing it of its red corpuscles. But if the case be so desperate that, in your opinion, blood-letting is called for, I would advise you to use the treatment suggested by Bozzolo for uræmia, which consists of a removal of a fair quantity of blood, (about twelve ounces) by opening a vein in the arm, after which, a weak sterilized saline solution is injected with the view of diluting the remainder of the blood in the system. The medicinal agents suggested for the relief of eclampsia are many. Each has its strong advocates, and almost as many opponents. Such must necessarily be the case until the pathology of the affection is cleared up.

Chloroform was once considered a specific for the disease, now we only regard it as a necessary adjuvant. Its continuous administration readily leads to fatty degeneration of the heart and other organs, and impairs the activity of the kidneys. But Vinay refers to a number of patients who have been kept under its influence from six to twenty-four hours. Gelli reports six cases with but one death. Gilbert reported twenty cases with no deaths. Hurd twenty-one with no deaths, Charpentier sixty-three with seven deaths, a mortality of only eleven per cent. These reports speak much for the great value of the drug; but, on the other hand, it should be mentioned that its use in the Maternity of Philadelphia gave a mortality of fifty per cent.

Chloral I regard as one of our most valuable agents in the treatment of eclampsia. It meets the indication clearly. It is an antiseptic and sedative; it produces an anæmic condition of the brain and weakens the reflex activity of the spinal centres; it lowers arterial pressure and dilates superficial vessels. There is a remarkable variation in the quantity of this drug capable of producing a fatal effect. A dose of thirty grs. has been known to produce death, whilst one ounce has been taken with impunity. I believe that many of the ill effects attributed to chloral are due to impurities in the drug. In eclampsia thirty grs. of chloral ought to be given by the rectum, mixed with the yelk of an egg and two or three ounces of milk. I would repeat the dose after each convulsion. Plant reports a case after delivery in which he gave two hundred and fifty grains in twenty-four hours. Pinard at the Hospital Lariboisiere in 1883 treated eight cases with one death. He gave six to eight grams at one injection. Winckel employs one to two grams after each attack until twelve grams are taken in twenty-four hours. He has achieved the low mortality of 7.6 per cent by the combined method of chloroform and chloral—probably the two best medicinal agents we have at our command in the treatment of this affection.

If I had a case to-day in which I did not think that obsterical interference was called for, these two drugs would be my sheet-anchors.

Morphine is another drug much lauded for its effects. Clarke, of Oswego, N. Y., claims brilliant results from its use. He gives 1 1-2 grains at a dose, and repeats the same in two hours if the paroxysm returns, Veit, of Germany, reports sixty cases with two deaths, giving a remarkable mortality of 3.3 per cent, but he also makes use of hot baths, which I regard as greatly responsible for his good results. Personally, I am opposed to the use of morphine, for, whilst it quiets the brain, it may excite the spinal column, even to the extent of producing convulsions. Moreover, as it checks all secretions except that of the skin, I consider it contra-indicated in a disease where we have an insufficiency of the eliminative organs present; besides, its administration has been known to produce the death of the fœtus. Veratrum viride is another favorite with many practitioners. I have had no personal experience with it, but of late it has been used hypodermically in large doses with great success, Love has reported twenty-three cases with no deaths. Jewett gives ten to twenty minims hypodermically and repeats it in an hour in a reduced dose. He asserts that no convulsion will occur if patient is sufficiently under veratrum to keep the cardiac pulsations below sixty. Other authorities give half dram doses of the fluid extract every fifteen minutes until vomiting is produced or convulsions cease. The drug is contra-indicated in depression and exhaustion. It should be used with care, lest excessive doses paralyse the muscles of respiration and produce death by asphyxia. Death

from the drug may also be produced by syncope.

Bromide of potash has its adherents, it being frequently administered in conjunction with chloral, but it should be rejected, as it is too slow, uncertain and feeble in its action. Moreover, potash is the most toxic of the mineral salts, and J. C. Simpson regards it as one of the convulsive principles found in urine. Elaterium, or better, its active principle, elaterin, is sometimes given to reduce the volume of circulation by draining water from the vessels, or "bleeding through the tissues." It is a serviceable drug but needs to be used with caution. Pilocarpine has had its day, but is now generally abandoned by the profession on account of its depressing effect on the heart. It increases saliva and bronchial secretion and may produce pulmonary edema. Its use is condemned by such authorities as Fordyce Barker, Winckel, Kaltenbach, Vinay and others. About seven years ago at the request of a confrere, I injected 1-8 of a grain, hypodermically, and had the mortification of seeing his patient die in twenty minutes.

Nitrite of Amyl is useful in checking convulsions, but is said to produce post-partum hemorrhage.

Obstetric intervention is the vital point upon which authorities differ. The medical profession generally are agreed that if labor has begun it is our duty to hasten it by artificial means; but there is considerable divergence of opinion just at what stage of pregnancy or labor such intervention is justifiable,and how such intervention should take place. In my opinion, it is our duty, if the patient be in labor to thoroughly anæsthetize her, dilating the os if necessary, and deliver at once, either by turning or by the forceps. The steps to be taken are dependent upon the stage to which labor has advanced. Gradual dilatation is worse than time wasted. It means a continuous irritation of the uterus, provoking the frequency and severity of the convulsions. Such a course is only pursued at great risk to the life of the mother and child. If the cervix is not already sufficiently dilated for the introduction of the forceps,dilate with your fingers, if possible, and if this is not successful do not hesitate to use your Goodell's dilator; if necessary incise the cervix to insure rapid delivery. Of course, it is understood that the patient is thoroughly narcotized by chloroform during this procedure, otherwise the necessary irritation of the uterus will only increase the convulsions. Nor do I limit obstetrical interference to the eclamptic who is in labor. I would extend it to any woman in puerperal convulsions, who has completed her seventh month of pregnancy, and take the chances of the child being viable, eminent authorities to the contrary notwithstanding.

I should mention that Pajot has condemned obstetrical interference as unreasonable and more dangerous than eclampsia itself, and Winkel considers it as obsolete, because of its dangers to mother and child. But I cannot see the force of their arguments. Parvin, who pins his faith, as a rule, to the maxim of Gooch "to take care of the convulsions and let the uterus take care of itself," admits that in about one-third of the cases of eclampsia convulsions cease if the uterus be emptied. I believe that in the majority of cases the convulsions will cease if the uterus be emptied, provided the patient is thoroughly under an anæsthetic during the delivery. For eclampsia, I hold, is but a sign that the uterus is intolerant of the presence of the fœtus. Other authorities, such as Barker, Busey, and Lusk induce labor, provided the mother's life is in danger and the disease has resisted the best directed medical treatment. Such procrastination I feel confident has been the cause of the death of many mothers and many more infants. But if the patient has not completed her seventh month, what then? In this case I would rely solely on medicinal agents as mentioned above. Under no circumstances would I sanction Duhrssen's method of emptying the uterus at any and all stages of pregnancy, whether the child is viable or not. I would consider such action as unnecessary sacrifice of human life, embryo though it be. I have seen puerperal convulsions subside in the fourth month of a pregnancy which was completed to term under approprite treatment; and I believe that the majority of cases in the early months of pregnancy would do likewise if permitted. Cæserian section in eclampsia I consider only justifiable when there is some mechanical obstruction to the passage of the fœtus, although Halbertsma has done the operation twelve times in grave cases with a mortality of only thirty-six per cent. If eclampsia comes on after labor I would pin my faith to the eliminatory treatment, assisted by chloral. In all cases, the medicinal treatment, directed towards stimulating the emunctories to action, is to be continued after delivery.

SUMMARY.

If called to a case of eclampsia in the early months of pregnancy, i. e. before the completion of the seventh month, I would immediately control the convulsions with

chloroform and proceed to eliminate the toxins from the system by catharsis, diaphoresis and diuresis as quickly as possible and in as large quantities as possible, giving, at the same time, some drug, preferably chloral, to control the nervous sensibility and diminish arterial pressure.

If the seventh month of pregnancy has been completed, I would thoroughly narcotize my patient with chloroform and produce delivery as quickly as possible. If occurring after delivery I would use the eliminative treatment with chloral.

The Principles of Conservative Surgery.*

By Irving S. Haynes, Ph. B., M. D., Professor of Practical Anatomy in the Cornell University Medical College; Visiting Surgeon to the Harlem Hospital; Member of the New York Academy Of Medicine, etc., etc.

Although it has cost me considerable effort to be present at this meeting, I am free to say that I am glad I accepted your President's invitation to present a paper for your consideration.

Instead of entering into the discussion of a single abstract surgical condition, it has seemed to me that it would be more interesting to the majority of the members of this Society if we were to briefly consider some one or two of the principles which underlie the surgery of the present time illustrated by cases taken from every day practice. This will result in producing a more or less rambling survey of several surgical conditions.

The dramatic and spectacular appeal to every one. The dramatic and spectacular events of medicine and surgery hold the attention, not only of the profession but also of the laiety, as much now as in the olden times.

A young doctor, fresh from the hospital, is at once asked by his interested friends how many legs and arms he has amputated. They plainly show their disappointment when he explains to them that surgery today seeks to save limbs, instead of removing them and that while he has not been amputating very many he has been instrumental in saving several.

The laiety do not wish to lose their hereditary conception of a surgeon as a man with bloody apron and gory arms, flourishing a large knife. They like to imagine such a surgeon severing a limb with one grand sweep of the knife and a few hard saw cuts. These ideas are the natural heritage from former generations before the discovery of anæsthesia, when the patient had to endure the agonies of all operations, his mind blunted only by opium. Here haste was the sine qua non—the great aim of the surgeon—attention to details and beauty of execution only came later after anæsthetics had been discovered. With the patient quietly sleeping under his knife, the surgeon could turn his attention to refining the various operations and divising new and remarkable ones. Nevertheless hands, arms, feet and legs came off, patients died from simple herniotomies, and the field of abdominal, thoracic and cranial surgery remained a terra incognita.

It was not until the causes of wound fever, suppuration, septicæmia and pyæmia had been discovered and their prevention made possible by antiseptic and aseptic measures that surgeons were placed in possession of weapons with which to successfully meet and overcome obstacles hitherto insurmountable The older surgeons, ignorant of the causes of infection, preferred to take their chances in a clean cut wound in healthy tissues to the fearful possibility and as a rule, probability of a fatal suppuration in crushed and lacerated members. Too much honor cannot be given to those pioneers Tyndall, Pasteur and Koch by whom the germ nature of infection was proven, nor to Lord Lister, who first made a practical application of this knowledge to surgery. His "antiseptic system" so crude and cumbersome and difficult of execution has been modified by those who followed him until the aseptic system—the system of absolute cleanliness—has come to be the practice with all surgeons at the present time.

The surgical infections of less than fifty years ago which carried off the great majority of patients subjected to operations, and that in the hands of the most skillful surgeons, are practically abolished to-day. Such immunity from fatal results lead to the common performance of operations which were unjustifiable under the old regime. Every part of the human body has been invaded by the enthusiastic and venturesome surgeons.

Surgical achievements have quickly followed one another, until at present the question is being asked, what will the end be? I venture to predict that, great as have been the advances in the past generation and especially during the last ten years, still more wonderful results will be achieved in the future. In the development period of every new undertaking many things are

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said and done that sober judgment later condems as unnecessary and even unjustifiable

By the furor of excitement the pendulum of common sense has been urged beyond the limits of reason. Already our more advanced surgeons are questioning the propriety of many surgical procedures. Sober criticism does not retard progress, it rather advances it. The conscientious surgeon may cut as deeply and widely at times as his most radical brother, but he first must feel in his own mind that it is necessary. And the same man at times feels that under the guize of necessity or perhaps really of opportunity, many operations done by the ultra radical are unnecessary and consequently unjustifiable.

I wish therefore to invite you to consider the principles which underlie conservative surgery. Conservative in this connection is illustrated through that line of action by which parts are preserved. Conservative is then in this sense preservative. The preservation of parts is secured in two diametrically opposite procedures. In one series of cases, paradoxical as it may seem, our conservatism is shown by early and thorough interference.

To cite a case under this class I would ask you to consider, for instance, an infection of the palm of the hand. Such cases usually follow a slight wound of the palm or fingers. When you see the patient, the hand and fingers are swollen ; the dorsum of the hand œdematous,and the palm distended with retained pus. Attending the usual local symptoms of swelling, pain, heat and redness there are signs of beginning systemic infection. Now, true conservative surgery means free incisions for the immediate and unrestricted escape of the pus. Were you to withhold the knife from this case, or to trifle with it by making small punctures here and there, most alarming results are possible. The infection may readily extend beneath the annular ligament of the wrist along the flexor tendons into the region of the forearm where the pus is pent up beneath the dense fasciæ which envelope the extremity. If recovery follows after such extensive involvement it will be at the expense of the function of the hand and fingers and such disability is very apt to be permanent. In such neglected cases amputation may be demanded to save a life poisoned by the absorption of the products of suppuration. Fatal terminations are not very rare also in such severe cases. When synovial bursæ and tendons are involved in a suppurative process true conservative surgery demands that you shall at once provide a free exit for the purulent fluid.

I remember, very vividly, one case in this connection. A woman, while doing her housework, scratched the outer border of the palmar surface of the thumb on a galvanized iron pail. She thought nothing of it at the time. In a few hours, however, the thumb began to swell and pain her. The infection gradually extended until, when I saw her about the second or third day, the process had involved the long flexor sheath of the thumb and the great synovial bursa in the palm of the hand. The fingers and dorsum of the hand were œdematous and pus was pointing at the inner palmar border. Free incisions were made into the thumb at the site of the original wound and along the inner border of the hand. The irrigating fluid flowed freely from one cut beneath the palmar tissues and out through the other, thus beautifully demonstrating the extent and close anatomical relations of the synovial bursæ of the long flexor tendons in the palm. It is sufficient to say that under free drainage and wet carbolic dressings the woman recovered from the infection and she escaped with very slight restriction of motion in the hand and fingers.

A case of a personal friend of mine, a physician in active practice, did not result so satisfactorily. Although he was under the care of one of our best surgeons, the infection originally starting from his finger spread to the hand and then into the forearm and did not stop until the arm itself was involved. He barely escaped with his life. The heritage bequeathed him by the germs includes bony anchylosis of the elbow and restricted movements in all the parts below. As if this were not bad enough, it is his right arm that suffered.

Another class of cases where conservatism is best shown by being radical is in cases of extravasated urine, where you find a man with the perineal and scrotol tissues infiltrated and distended by urine which has escaped through a ruptured urethra. A case from private practice will serve as a type of this condition. Mr. H., a German about 60, with wife living, but not content in his own pastures had gone browsing around in outside fields, as a result of his perverseness he contracted a lively gonorrhœa, which left him with a tight stricture. About a week before I saw him some doctor had forcibly attempted to dilate the stricture with the result of rupturing the urethra and forming a false passage. The urine escaped through the rent and filled the perineum, the scrotum, until it was as large as a child's head, the penis and even

the lower abdominal zone, demonstrating better than a whole volume of print the influence that the perineal fascia has in determining the course of extravasated urine. The knife was freely used, the perineum first opened and the bladder drained externally, the scrotum and penis and inguinal regions opened up with long incisions—down to the deeper parts—the urine squeezed out of the tissues, the stricture then located and cut. Recovery progressed satisfactorily, as it usually does in these cases, when thoroughly treated. The incisions which look so formidable at the time they are made, shrink into insignificant cutaneous scars. Although the skin over the entire region was a dusky blue and in places on the scrotum was black and looked as if already attacked by gangrene, it entirely recovered its normal condition.

I will illustrate this principle of saving by early cutting in another class of cases with which our thought and practice are very extensively occupied at the present time, namely, cases of appendicitis. We have all seen cases where death claimed its victim because surgery was given no opportunity of saving the patient. Conservatism is best shown by affording the sufferer the advantages of modern treatment and that at an early hour.

"When in doubt, operate" is a safe maxim, because early operations performed at a time of the surgeon's selection and with sufficient preparation to secure all the benefits of aseptic surgery, with the patient in good physical condition and the foul appendicular contents still pent up within the tube, yield brilliant results. The appendix is removed with ease—the adhesions being few—the operation can be thoroughly done, as haste is unnecessary, herniæ can be prevented as no drainage is needed, the edges of the tissues are not infected, and hence grow together when carefully sutured in opposition and finally the mortality is almost nil, being that of the anæsthetic itself. Of course, after the indications for the operation are imperative, surgical interference is the only possible treatment, but surgery at this time should not be called conservative, it is the dernier resort. It is at the *beginning* of the case, before it is a question of *must* that true conservatism can be practiced by the doctor in charge, while he still has two alternatives to pursue, without immediate detriment to his patient.

Into this same class fall those cases of herniæ in which it is still an open question whether strangulation has occurred or not. The right plan is to propose operation *before* not *after* strangulation exists, as surgery is robbed of its conservatism when the operation becomes a necessity and the patient is confronted with the dangers of a gangrenous coil of intestine, that he would have escaped had operative treatment been instituted earlier.

I will add one more case, namely, puerperal septicæmia from delay in cleaning out a foul uterus. This is so important that I must pause a moment to insist that, as a rule, chills in the purpereum, especially from the third to the tenth day or later, do not mean taking cold but septic absorption from retained secundines or decomposing blood clots and that only one plan is really justifiable and that is to clean out the uterus at once. It can usually be done easily and without an anæsthetic and with the assistance only of the nurse. After you have the uterus clean then give all the quinine you choose or not give it at all. Your patient is safe either way.

The same rule of action applies to cancers, obstruction of the bowels, foreign bodies in the throat, retention of urine, and many similar conditions which will readily occur to you but which, for lack of time, we cannot dwell upon.

To recapitulate then, the principle which underlies this first class of cases is that true conservatism in surgery means early radicalism, a paradox apparently, but on close examination a self-evident axiom.

In the second class of cases conservatism means more nearly what we ordinarily understand by the term, in that it is opposed to radicalism—radicalism as applied to surgery—meaning its practice in an extreme and reckless manner. This principle will be illustrated, in one class of cases by the history of David A., who was brought to the Harlem Hospital July 9th, '98, with his left hand crushed by a street car. The fourth and fifth fingers were crushed to a pulp, up to the web of the hand. The skin was torn from the base of the thumb downward and across the back of the hand to the knuckle of the fourth finger. The extensor tendons were visible when this flap was raised. Winding about the base of the thumb in the palm was a lacerated wound, some two and a half inches long. Another lacerated wound was across the inner part of the palm of the hand near the web of the fingers. All the tissues comprising the palm of the hand, fascia, vessels, nerves, tendons, were badly bruised and stripped clean away from the interossei muscles. The superficial palmar arch was torn by the wound at the base of the thumb. The hand was swollen, bluish and full of street dirt. Only amputation at the wrist seemed justifiable with such a

mass of crushed tissue already infected, yet I determined to make an attempt to save some part of his hand, a hooked finger being better than one of iron.

It is unnecessary to give the details of treatment, except to say that the crushed ring and little fingers were amputated through the end of the metacarpal bones. All dirt and dead tissues removed, free drainage assured by six or seven rubber tubes carried up among the anterior and posterior tendons and the limb treated to a continuous irrigation of 1-100 carbolic acid and water. Healing was rapid—suppuration rather rapid at first—soon died out. The man was in the office a short time since and the result is most gratifying. He has the power to flex and extend his two fingers and thumb through about two-thirds of their normal range of motion, notwithstanding all the tendons to them were laid bare and granulation tissues must have formed about them all. No artificial limb maker could devise anything that would at all compare to the preserved parts, defective and limited in motion though they be.

Such results as this were almost impossible before the nature of infection was known and measures discovered to combat it. Amputation was a necessity in the olden times and some surgeons seem to think that it is at present, but careful attention to the details of the antiseptic and aseptic treatment of crushed hands and feet will save many members heretofore condemned to the Potter's field.

Another field which has been the ground of contention between the extreme radicals and conservatives, is that of pelvic surgery in the female.

It has been demonstrated by Polk, Barrows, Dudley and others that in a tube not wholly diseased the healthy part could be left behind and its lumen preserved, that when an ovary was not entirely degenerated it was wise to leave the unaffected, though small, part. Conception and felicitious child-bearing have resulted in some of these cases from such wise conservatism.

Arrangements have been recently offered for the simultaneous removal of the uterus with the diseased adnexa, even though in itself the uterus did not need removal. If the tubes and ovaries have to be removed on account of their diseased condition, the removal of the uterus also is not justified by any argument from theory or pratice, for it is proved that even though infected, by curetting free drainage and proper local treatment, it will return to a normal state and so preserve the integrity of the pelvic floor.

After removal of all the internal generative organs the woman is forever incapable of her true function—of reproduction—but with wise selection and conservative operations we know that she can retain the reproductive function in many instances. Castration is now no longer advocated for hypertrophied prostrates — the diseased gland itself is attacked. Floating kidneys are not removed but sutured in their proper position. In short, true conservatism has held ultra-radicalism in check and supplied reason for conjecture and facts for fancies.

We are all working together for a common purpose—for benefitting our fellow men. We all make mistakes—for we are all very human—yet we should not make the same mistakes twice if possible, and we should learn by the mistakes, as well as the successes of others. Honest criticism of our own work as well as that of others, is helpful to all concerned, for we thereby learn the best way to secure results that shall benefit the patient and honor the operator.

I wish to thank you all for your patience under these wandering remarks. If I have said anything worthy of your consideration or that shall induce a fresh interest in true conservatism in surgery, I shall feel more than repaid for the undertaking.

The Weak Heart in Pneumonia.

By F. R. Millard, M. D., San Diego, Cal.

The death of Congressman Dingley, in Washington recently, again illustrates how small a chance an American statesman has when he enters into a contest with pneumonia. The result can almost as certainly be foretold as when a Spanish warship encounters Admiral Dewey's or Admiral Sampson's fleet.

When one reads the bulletins sent daily from the one statesman's sick room, they are so like all the others that one wonders why the associated press company does not advise the newspapers that receive its dispatches to post up in their rooms a complete list of the bulletins of one typical case, and then when a new one came on they could telegraph his name, age and any particulars that would be of general interest, and afterward all that need be sent would be, say Dingley, pneumonia, second day's bulletin, and the compositor could reproduce the second bulletin on the card, and so for each succeeding day. Of course, it would occasionally be necessary to repeat the bulletin one or more times, and also to omit one or more, skipping from say 5th to 7th or 8th, depending on how soon or late alarming weakness of the heart came on, and this might depend a good deal on the doctor.

If he aspired to a seat among the scientific, and early bled the patient into his own blood vessels it would come on early. If his aspiration was higher, to a seat among the only scientific, and used strychnine freely, it would come on later. But come it does, and the end is peace.

There is a plentiful lack of appreciation of the first cause why the heart is weak during pneumonia. It is said that part of the lung being useless the heart tries to send the usual amount of blood through the restricted area and fails to do so, and what is sent through is imperfectly oxygenized and the heart is not only overworked, but is badly nourished also, and at last is exhausted. That this exhaustion does not always prove fatal, is due to that wise provision of nature, who foreseeing what fools her children would be, wisely planned that if a toxin were slowly introduced into the system, a certain degree of tolerance would be established to such an extent that no permanent harm would result from an amount which, if it was rapidly introduced would prove fatal. The toxins of pneumonia are no exception to this rule, and as in other diseases, if she is not prevented by viscious treatment or surroundings nature will form an antitoxin and cure the patient in about 88 per cent. of cases.

There is a wide difference between the statement of doctors as to the per cent. that does recover under modern treatment. One giving 72 per cent., another 56 per cent. A large proportion of those dying die from the heart. There is a cause antedating the one mentioned, and one that is continually acting as any one can know who will carefully observe a pneumonia from its inception. At a tmie when air and blood enter and leave the lung freely, the pulse rate begins to rise, and not until the rate has increased 10 or 15 beats per minute do the patient's sensations direct his attention to the chest, and it is usually some hours later before by auscultation we can detect the beginning of the pneumonic process. Now this rise can be from no cause but toxins in the blood.

Once we were told that the only scientific course to pursue when the heart became embarrassed was to perform the brilliant operation of bleeding the patient into his own blood vessels. This scientific feat is accomplished by introducing into the circulation another poison in addition to the one under which the heart is already staggering. If this added poison neutralized the pneumo-toxin, or if it aided its elimination, or assisted nature in forming the pneumo-antitoxin, common sense might approve the treatment. But it does neither. What it does do is to dilate the capillaries and thus slow the current through them, and so a smaller amount of blood reaches the right heart in a given time, and there is apparently temporary relief, and what blood does pass through the lungs is better oxygenated. But the total of oxygen absorbed, and of $C.O_2$ given off is unchanged.

Now what is this blood doing while we have it stowed away in the capillaries? It is taking up an increased amount of that same toxin which caused the pulse rate to rise 10 to 15 beats above the normal rate, and this blood must at last return to torment the heart. The science in this plan is fairly well matched by the plan a scientist proposed by which to help a tired burden-bearer over a hill, at the foot of which he found himself so exhausted that he despaired of ever reaching the summit. Scientists in every age have been noted for benevolence, and this one was no exception to the rule. He advised the burden-bearer to pick up a stone about half as heavy as he could lift, put it on top of his load, carry it to the top of the hill, then throw it off, and he would be wonderfully refreshed, and could go on his way rejoicing.

Our history does not tell us how the burden-bearer got over the hill, but it does tell us that so many pneumonics died from the heart that we were more than willing to welcome the true heart tonic, strychnine, and to follow the advice of a voluminous writer and self-appointed highpriest of the only scientific temple of inner medicine. He reasons that since the heart would certainly get weak, the only scientific should forestall this weakness by giving strychnine both through the mouth and through the needle. Not only this, but give it like we vote, early and often. So we, desiring above all else to be only scientific, relegated the mouth route to the nurse, while we kept the needle hot with use and antiseptics. We have not found that the ratio of pneumonics dying from the heart is any less than before; but the period at which fatal collapse comes on is postponed more than one full day, and we rejoice with exceeding great joy, and experience a soulful satisfaction that is only equaled by the satisfaction which the fashionable woman experiences when she realizes that she is the best dressed woman in church.

Let us look at this so-called only scientific treatment in the light of common sense. Strychnine in the hand of the doctor is very like the spur on the horseman's bootheel. The spur does not add one particle to the strength of the horse, but it does enable the rider to keep the horse at the top of his speed until he falls exhausted. So strych-

nine enables the doctor to get the last particle of reserve force out of the heart. But the horseman who must ride his horse 100 miles during the day does not bury the rowels in his horse's side as soon as he is mounted, and no matter what the only scientific may say, it is not common sense to give strychnine until it is needed, and it is not needed in every case, nor in fact does every patient ill from pneumonia need drug treatment at all, as I proved in my own person almost fifty years ago. I assured my medical friends that if a man had been perfectly healthy pneumonia was a very simple disease, which nature would cure in about a week if she was permitted to do so. Acting on this theory I took water and nothing else until the fever was gone and I was ravenously hungry.

The day on which I took pneumonia four others in the vicinity took it also. Before I had broken my fast, three of them had been buried, and before the fourth one was out of the doctor's care, my strength was so far recovered that I ran a foot race of 150 yards, and won it over the local champion, and this in spite of the fact that nearly, if not all, of the left lung had been inflamed. Since then I have attended many pneumonics who took very little medicine. But I have not prohibited all food. But even this would be better than constant stuffing that some think necessary. Of course I mean in a well nourished patient. If all food is withheld the patient will feel very weak, but if the heart has not been poisoned with drugs recovery is surprisingly rapid.

Since fictitious bleeding has usurped the place formerly held by venesection in treating pneumonia, the ratio of those dying from the heart has greatly increased. A little consideration will enable one to explain this fact. We can approximately estimate the ratio of $C.O_2$ in venous blood to what it is in arterial blood, but we cannot tell what is the ratio of pneumo-toxin in venous, to that in arterial blood. Probably it is higher than is the ratio of $C.O_2$. Now it is all venous blood that we remove by venesection; while when we resort to fictitious bleeding, the blood that we temporarily remove from the current is all arterial blood—the kind of blood the heart most needs.

I have never seen a man, either doctor or layman, who did not express surprise when he first observed how venesection early in pneumonia strengthened the heart and pulse if it was judiciously performed. This means that the volume of blood was reduced to an amount that the heart could manage. If this early venesection is followed by the continued application of ice, or snow, and the hourly administration of chloride of calcium, the patient will often be convalescent in 36 or 48 hours and be at his usual work in a week. Later in the course of the disease it is not very infrequent that the life of the patient depends on a prompt venesection, and the free use of strychnine.

If we tell the only scientific that the ratio of pneumonics dying from the heart is five times as great as it was 75 years ago, they say that medicine is a progressive science. If we tell them that the mortality rate from pneumonia has increased 300 per cent. in three-quarters of a century, they answer that the science of medicine is advancing with strides that are truly gigantic. If we ask them to abandon a treatment founded on theories that do not accord with facts, and that is condemned by its want of success, and in place of it adopt a treatment founded on common sense and recommended by its success, they answer, the treatment you recommend is unscientific and antiquated, and our æsthetic souls revolt against its barbarity. Between the lines we read—and if we should adopt it and so reduce our mortality rate even one-half of 300 per cent. we should thereby prove that we had been d— fools, and that we will never do.

The Treatment of Whooping Cough.

By Robert C. Kenner, A. M., M. D.,
Louisville, Ky.

The treatment of whooping cough along the lines followed in the past is most unsatisfactory. If we will but make an examination of the literature of whooping cough, we shall find that the number of remedies which have been employed for this affection have not only been numerous indeed, but they have been diverse. They, too, have been lauded as specifics. In truth, therapeutic history is filled with accounts of remedies that have had a brief period of popularity and then sunk into oblivion.

Delicate children must be well watched during the continuance of this affection. There being existent a catarrhal condition of the bronchial tubes, exposure to inclement weather, or allowing children to go without sufficient clothing is very likely to be attended with the supervention of pneumonia. We will defeat our best efforts toward affecting a successful result, if we fail to give attention to this detail. Another important matter worthy of our attention is feeding. We will find that paroxysms come on very frequently, and in many children emesis supervenes. Often this

leads to considerable emaciation, and in many this insufficiency of food forms an element that gives us serious trouble. The weakness induced by inadequate feeding makes an attack of pneumonia or other complications a possibility. When it is necessary we will have to give liquid predigested foods—those that are quickly assimilated. In the manner, suited to the particular case, we shall have to see that the patient is fed adequately.

The therapeutic indications are those looking to the correction of the bronchial catarrh, the control, or, amelioration of the paroxysmal seizures and the inhalation of antiseptics that directly tend to produce an annihilation of the causative factors.

An old time remedy, which has found favor for several generations with the most practical men, has been belladonna. I rely upon this as one of my steadfast and most reliable remedies. It tends to lessen the severity of the paroxysms of coughing, and tends, I am sure, to materially abridge the duration of the affection. I give it throughout the course of the disease. I give it along with ipecacuhana, and the syrup of tolu. These last mentioned agents exert a favorable action on the catarrhal condition of the tubes. It is my custom to exhibit all of these agents in one prescription as follows, (for a child one year old):

℞ Tinct. bellad., gtt. xvj.
Vin. ipecac., gtt. xij.
Syr. tolutan., ʒij.
Misce. Sig: Teaspoonful every three hours.

Children are not awakened to take the remedy, but are given it only when awake.

As a means of making the coming of the paroxysms far apart, and of ameliorating their severity, I give along through the course of the disease, the bromide of ammonia. This I give in doses of four grains dissolved in water. This I order four times daily, and an hour before meal time, and just before retiring at night.

In the course of twenty years, I have found no internal remedies so successful as these. But along with this internal treatment we must carry our antiseptic inhalation.

Conjoined with internal remedies we can by using inhalation bring about a cure in less than half the time usually occupied in the treatment of this affection. A thorough study of the disease has convinced me that the disease is not a self-limited affection.

I believe proper treatment will bring about a cure in ten to fifteen days.

Coming back to that part of the treatment comprehended under the name of inhalation of antiseptics, I may say I rely upon vapo-cresolene—this is vapor kept up in the patient's room during the night, and I am sure it very materially assists in bringing about a cure of the disease. In fact, I have found the remedies here advocated to come short of producing rapid cures when this was omitted. I, therefore, include it as an essential part of my treatment, and insist upon it in every case. It is very simple of application, and patients will experience no trouble in using it.

I have not taken time to give clinical histories of patients treated by the method here advocated, since that is of little value compared with the explanation of the treatment, and the statistics based upon the method advocated.

According to the method here advocated I have treated 100 cases, with an average duration of fifteen days.

I have thrown doubt above on the "old time" idea, as I regard it, of this affection being a self-limited disease, and requiring six weeks or longer for its complete evolution. That view, I am persuaded, will soon have no advocates. My cases, as well as other observers, prove this an erroneous view.

Abscess of the Lung—with a Reference to Its Surgical Treatment.

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Abscess of the lung presents a peculiar interest both to the physician and to the surgeon; to the former on account of the many difficulties surrounding its early diagnosis, and to the latter on account of the varied obstacles in the way of active treatment.

Contributing not a little to this peculiar condition is the relation which the lung bears to its surroundings.

For being necessarily a delicately formed structure nature has protected it with a firm bony framework, capable it is true, of a considerable elasticity of movement, when struck or pressed upon, yet firm enough to resist a comparatively large degree of violence.

Within the chest cavity are the folds of the pleura, with layers so arranged as to afford a not less important protection, in lessening the friction between the chest wall and the lung, which the act of respiration makes imperative.

When called upon to diagnose or to treat a pathological condition of the lung, it is

necessary to do so through the pleural sac. It is well, therefore, in discussing this important subject before us, to remember what the pleura is, and to consider its adaptability for absorption, especially when septic infection is so apt to penetrate. Our friend, the anatomist, tells us "it is now regarded as a large lymph-space, like that of the peritoneum, and communicates by stomata with the surrounding subpleural lymphatic vessels. . . . . The pulmonary plura is very delicate and transparent, and is also attached to the lung tissue by elastic connective tissue, which serves as a nidus for a plexus of capillaries from the bronchial arteries and a plexus of lymphatic vessels which communicate with the lymph spaces in the areolar tissue of the lobules of the lung."

Fortunate then is the surgeon who succeeds in preventing an empyema by removing the abscess without infecting the large pleural sac. For having noted the relation between lung and pleura, it is easily seen, how readily an abscess of the lung can empty its collection of pus into the pleural cavity. When we remember the large absorbing surface there, we can understand why the patient should then show such profound symptoms of septic infection.

I do not wish to imply that all abscesses of the lung are necessarily fatal. Here as elsewhere in pathological conditions, we have what might be termed some curious anomalies.

I have seen an abscess of the lung in a boy of nine years, whose parents would not allow an operation of any kind, recover without surgical treatment, after a prolonged illness. The abscess had pointed between the fourth and fifth rib on the right side of the chest midway between the sternum and axillary line.

I have seen cases where the pus has found its exit through the bronchus to the trachea and the patient make a tedious recovery.

Indeed there are cases where, owing to its situation, and possibly to the condition of the patient, operative procedures are not advisable, and we may hope for such, a then fortunate termination.

With regard to the diagnosis we must admit that, despite the many methods used in attempts to locate an abscess of the lung, it has as yet no positive sign to make us assured of its presence.

It is hardly to be wondered at then, in quite a number of cases, the treatment has been what has been aptly termed "unpremeditated."

A case presents itself with all the symptoms of an empyema, even to the presence of pus in the aspirating syringe, and when an incision is made through the chest wall, no pus is found in the pleural cavity.

In some cases there are no adhesions of the pleural sac, but we may see a bulging in the lobe of the lung, and the presence of a large pulmonary abscess is discovered.

During the past year, in this line, I have had no less than three interesting cases. In one of them in particular, there was extensive œdema of the integument over the entire affected side. The aspirating needle showed the presence of pus, the barrel of the syringe being nearly filled. I made an incision and resected, superiosteal, a portion of the fifth and sixth rib, and opened the chest cavity. Instead of pus I found the pleura in a healthy condition, and I noticed the lung did not entirely collapse. Near the lower lobe was a firm rounded portion, which, to the finger, showed evidence of containing pus.

Introducing a drainage tube into the pleural cavity I cleansed the entire surface of the pleura with sol. per. oxide of hydrogen. My object in doing this was to have the oxidizing effect of the per. oxide act as a mild caustic to the surface of the pleura, which it does readily when it comes into contact with the serious secretion. This renders the cavity aseptic, and at the same time lessens the absorbing power of the pleura. About the center of the abscess I inserted an aspirating needle and, fortunately, removed about three ounces of pus. Closing the valve of the syringe, and having thoroughly cleansed it with sterilized water, I was able then to force two drams of per. oxide into the abscess cavity, without removing the needle. This served the double purpose of partially disinfecting the cavity and expanding the swelling to its former size.

Under these circumstances I was enabled to make an incision large enough to introduce a drainage tube, protecting the opening with sterilized gauze. With the tube into the cavity it was an easy matter to cleanse it with the per. oxide solution. Owing to the wall of the abscess being somewhat thin the bleeding from the incision was comparatively slight. The drainage tube was allowed to remain in the pleural cavity covered externally with gauze and absorbent cotton. Through this tube the pleural cavity was washed with per oxide solution twice daily.

There was a slight pleuritis on the affected side which subsided on the fifth day. The tube was then removed, a strip of gauze inserted and the external wound allowed to close on the tenth day.

Six months after this patient had gained

twenty pounds in weight and had returned to his regular employment.

In another case however, where the aspirating needle failed to locate the abscess, on account of its being more deeply seated, a piece of rib having been resected, I introduced a drainage tube into the pleural cavity and treated it with per oxide solution as before. The abscess ruptured into the bronchial tube and the patient made a happy though more tedious recovery. Whether the collapsed condition of the lung hastened the discharge of pus I am unable to say, but my impression was that it did.

In the third case although the abscess could be located near the surface of the lung, in attempting to use the aspirating needle, some troublesome bleeding occurred, and it was not thought advisable to incise the lung tissue. A drainage tube was inserted and the pleural cavity treated with per oxide solution every four hours. On the second day the abscess ruptured into the pleural cavity and was drained thorugh the tube and beyond what might be called a mild pleuritis no complications followed.

In this case as in the former convalesence was prolonged.

In casually reviewing these cases which have so recently come under personal observation, it is my impression that our surgery in this direction should be conservative rather that too radical if we would hope for good results.

In this short paper it is not possible to do justice to this important subject. I have endeavored to merely refer to a few interesting points in connection with it.

It is a subject which occupies the borderland of medicine and surgery, and where the physician and the surgeon must work in harmony to accomplish what must ever be our highest aim, to shape our course of treatment that the patient may have the shortest route to recovery with the least possible amount of suffering.

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The Philosophy of Maternal Impressions.

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From the earliest times there has been a widespread belief that it is possible for a mental impression received by a female, enceinte, to be conveyed in some unaccountable way to the fœtus in utero, producing a lasting blemish that is afterwards recognized as conforming in some particular with the maternal mental impression that had occurred during the pregnency. This belief has by common consent come to be termed "maternal impressions."

Whether maternal impressions should be labeled a fact, a theory, an hypothesis or a speculation, has for a long time engaged the mind of the medical profession, and as yet with individual convictions only, and these individual convictions range through all the degrees between fact and the wildest speculation, so that the diversity of opinion, one might almost say, is limited only by the number of opinions expressed, and moreover this difference is not limited to any one class, the most scholarly, the most careful thinker and honest reasoner is as varied in his beliefs as his indifferent brother, and more or less doubt seems to be in the minds of all.

In Mr. Nordhoff's[1] intelligent and suggestive treatise on the reasonableness of Christianity, he takes the atomic theory as an illustration. Mr. Nordhoff shows that while no one has seen or in any other way physically apprehended an atom or a molecule, or can possibly see or apprehend either, yet the defender of this-theory supports it because it is not possible to demonstrate the contrary, and also because he finds that it gives a sensible and reasonable explanation and justification of a multitude of well known phenomena that cannot be explained by any other hypothesis and is consistent with well ascertained natural laws. Maternal impressions is more than a speculation, and we are hardly justified in declaring it to be a fact, but reasoning from analogy we can apply Mr. Nordhoff's argument with equal force and consider it as a theory. "Follow the middle path," taught Kwang-tsze, "avoid extremes, be moderate;" and the importance this Chinese sage set upon the precept may be gathered from the fact that Confucius had already enunciated it and Kwang-tsze hated to agree with Confucius.

[2]Bishop Vaughn says: "Science has nothing to do with belief, but with experiment and verification after having taken a number of things for granted. When science speaks the word matter, it well knows that back of the word there is something unknown, unknowable and undefinable."

[3]Spencer says, "every inference depends on premise, every premise, if it admits of proof, depends on other premises; and if the proof of the proof be continually demanded, it must either end in an unproved premise or in the acknowledgment that there can not be reached any premise on which the entire series of proof depends."

And again, [4]Peabody says: "We talk indeed of gravitation, caloric, electricity, magnetism, etc., as if we knew what they

are, yet these are but exphemisms for our ignorance—fence-words set up at the outermost limit of our knowledge."

A theory of maternal impressions like any other legitimate theory could not pretend to be a finite expression of truth, but rather should appear as an attempt to summarize the probabilities of the question, and to indicate the direction in which the search for further knowledge should be pursued. Certain facts are presented to our view, and the theory is only the cord on which we endeavor to string the facts in an order and arrangement which shall make their otherwise dubious meaning and their relations to one another clear to our understanding.

The demonstrations made by Professor Ercoloni, of Barcelona, show that the placenta in mammals is a gland especially developed for the purpose, quite similar in its action to the mammary glands, and that the fœtus in its circulation and nerve system is as independent of the mother before as after birth. There is always contact between the mother and embryo, and from the earliest age there is a communication between them by which absorption from one to the other takes place. If a maternal impression is transferred, it must be by means of this contact or absorptive communication however simple or complex it may be.

[5]Edmund Willson Roberts says: "The majority, perhaps all, of the human race possess the faculty of reading the thoughts of others without recourse to speech or to outward signs;" and Mr. Roberts goes on to explain that distance is not to be considered—an intervention of say two hundred miles not interfering with the process. Now if "thought transferrence" between adults does occur without the ordinary means of communication as Mr. Roberts and the "Society for Psychical Researchs" report from their recent investigations. why may not a maternal impression be transferred from mother to embryo when the conditions and connections between them are so infinitely more complete and favorable for it than they could be at any time for "mind transferrence" between adults. And moreover, if this transferrence is possible by means of contact or the absorptive communication between mother and embryo, why may not the impression occur at any time during fœtal life. Just here it may be well to remember that from the sacral plexus of the cerebro-spinal system are derived several branches, one of which, the ileo-inguinalis, goes to the skin of the labiæ; another, the crural branch, to the round ligament and to the inguinal skin; another, the hemorrhoidal, goes to the fundus of the womb and to the bladder; another, the perineal, to the sphincters and to the perineum, and there is still another that goes to the clitoris and to the nymphæ. Now all of these nerves are of the cerebro-spinal system, and a very important fact besides is, that this system commingles through the instrumentality of the anterior communicating branches, and in instances, by more direct anastomosis with the great sympathetic system. This, the great sympathetic, which presides so directly over the entire process of nutrition, also furnishes an abundant supply of branches directly to the womb, the ovaries, the vagina and external genitalia. As [6]Dr. Reed says: "The genital organs of woman, considered in the aggregate are nothing more or less than a central telegraphic office, from which wires radiate to every nook and corner of the system, and over which are transmitted messages, morbific or otherwise, as the case may be; and it should be remembered that telegraphic messages travel both ways over the same wire, that there are both receiving and sending offices at each end of the line, and the great physiological manifestation of this fact is to be found in pregnancy."

That which seriously disturbs a mother's health, which deprives her of sleep, takes away her appetite, interferes with the assimilation of her food, makes the secretion abnormal and leads to emaciation, can scarcely do this and leave the progress of growth and development in the fœtus to be pursued in a vigorous and normal way. The opposite, indeed, appears to be almost necessarily true; and it is impossible to estimate the measure of the ultimate misfortune which may arise from even a temporary check to the intra-uterine development of the child, because that development takes place in the healthy state with extraordinary rapidity. Bodily disease affecting the mother during pregnancy may in like manner lead to inperfection in her offspring. The proper nutrition of the fœtus is interrupted by her bodily disease, and something beyond a mere retardation of growth may be the result. It does not appear to be difficult to understand how misdirection as well as arrest or delay may thus be given to fœtal growth.

Loug ago in natural history science, maturnal impressions excited the attention of thoughtful minds. A writer on the subject in the seventeenth century, terminates his article with,[7] "*Hac de re scribimus eo confidentius quod adhuc supersunt homines honesti complures qui hæc viderint*,"—(on this we write the more confidently as there are still alive many respectable individuals who actually saw what I have been describing). [8]Aristotle, the intellect of Plato's

school, so distinguished by Plato himself—was not only the great authority on logic and rhetoric, but the very father of zoology and botany and hence biology—refers to it in his history of animals. And in the oldest history we find,[9]

"And Jacob took him rods of green poplar and of the hazel and chestnut tree; and piled white stakes in them and made the white appear which was in the rods."

"And he set the rods which he had piled before the flocks in the gutter in the watering troughs where the flocks came to drink, that they should conceive when they came to drink."

"And the flocks conceived before the rods and brought forth cattle ring-streaked, speckled and spotted."

The folk-lore of every country contains numerous examples of cases in which maternal impressions are believed to account for the deformities which appear in the offspring; and this remark holds true, not of man alone, but also of the animals which are most closely associated with him in his daily life.

In English history we find a classical instance of a mental peculiarity apparently traceably to maternal influence in the case of King James I. Sir Kenelm Digby stated that the King had a great dread of a drawn sword and attributes it to the fright which Queen Mary received, while pregnant, when she witnessed the murder of Rizzio. When Sir Kenelm was knighted by James, the latter, he said, "could not look at the sword, and he had almost thrust the point into my eye, had not the Duke of Buckingham guided his hand aright."

It might be advanced as an argument against maternal impressions, that so many women in different stages of pregnancy, undergo violent mental disturbance—anxiety, abhorrence, terror, etc., without any noticeable effect. But is it not very common to find that intense excitement of the maternal mind is fatal to fœtal life, or what is worse productive of idiocy?

One of the strangest things in regard to maternal impressions, is that, in most cases that have been reported, it is to be noticed that the predisposing mental impression was what we may term mild, perhaps but the thought of a moment, as instanced in the following case related to the writer by the late [10]Dr. Wallace. Some women in idle talk were discussing the subject (maternal impressions) and one of them, pregnant at the time, said: "When mine comes, if it is marked, I hope it will be here," placing a hand on one of her hips. When the child was born, the mark of an extended hand was plainly delineated on the hip, corresponding apparently with the laughing gesture of the mother.

[11]Dr. Black tells me of the following which occurred in his practice. A lady, strong, healthy and usually well, six months pregnant, was driving with a female companion. They came suddenly upon a deformed man in the road, and the companion not wishing her to see him, grasped her by the forearm, but too late to stop her from looking. Her child born at term, normally, had the mother mark on the spot where she had been grasped by her friend.

In these cases we have no reason to think that the maternal mind was affected, in any degree, more than we would expect to find in the trivial happenings of every-day life, except that in Dr. Black's case, the duration of fœtal life had reached "six months," at which time women are prone to depression and fanciful forebodings. We notice in a majority of the cases reported, that when the period in the pregnancy is stated, it is early. There is one case on record in which the maternal impression was received on the twenty-first day of embryonic life, almost two months before the woman thought that she was pregnant. And Dr. Black's case leads to the thought that the maternal impression can be transmitted as late as the sixth month of gestation.

A most remarkable, interesting and convincing case is that of [12]Dr. Bass, who relates: "Shortly before I was born, I do not know how long, while my mother was ironing, her little girl, two or three years old, came up behind her and laid her hand on the table. My mother set the heated iron back on her right hand, resting on nearly the whole of the little finger and about two-thirds of the next finger, with the point of the iron resting about half-way across the middle finger just behind the nail. Upon hearing the screams of her child, my mother took her up and tried to pacify her. She found the fingers as described, very red but not vesicated. When I was born, the same fingers on the right hand were reddened, corresponding in color, shape, etc., with those of the little girl, and I have retained that color, etc., for more than fifty years."

We know that a woman will often jump to a conclusion to which a man would refuse agreement without deliberate reasoning, and whether this is owing to intuitive knowledge or to an obscure congenital faculty, we do not know, but the fact is not to be denied. And most women are very ready to believe in maternal impressions. With some the strength of the belief may vary, and indeed it is possible to find one who scorns the reasonings of other women, declaring her belief, that all cases of mater-

nal impressions are either products of superstition or founded on mistaken observation or unwarranted interpretation of facts.

The writer had an opportunity recently to question two midwives in Philadelphia and was surprised to find them of exactly different opinions. One said she had given birth to eight children and each of them had a birth-mark for which she had a previous history. "There's my Jimmie! when I was carrying him a chicken pecked me on the hand, and when he was born he had a perfect immitation of a chicken on his back," &c. The other was as positive in declaring her negative belief, and related that when she was in her first pregnancy, she met on the street a man who had a "horrible face," so repulsive that she shuddered and thought of her expected child. The man evidently lived near her home, as she saw him afterwards several times and always with dismay and forebodings. Finally she avoided the windows lest perhaps she would see him passing. The thought preyed on her mind until she was delivered and assured that the child had no unusual mark.

Whether an acquired condition of a parent can be inherited by the offspring is a long standing subject for disagreement among writers on heredity. But why? It is a matter of certainty that certain parental malformations (which are certainly acquired states) can be handed down to the next generation. Statistics show that the probability of deaf-mutism being inherited is as seven to one, and is this not irrefutably exemplified in the oft-quoted case of the progeny of the man (Gratio Kelleia) who had six fingers on each hand and six toes on each foot. While we have a complete record of the malformations in this (Kelleia) family, it is strange that the keepers of this record make no mention of the part that maternal impressions played. That they were chiefly instrumental we cannot say, but it is quite possible as it would be very natural for a deformed parent to dread the prospect of imperfection in the coming child. It is certainly to be expected that the malformation was a frequent subject for conversation and much thoughtful speculation among the Kelleia women. And what woman, being pregnant, after having given birth to a child with a congenital blemish, would not in her self communings dwell on that blemish and fret about its possible reproduction.

What is more probable than that the pregnant deaf-mute would often wonder if her child would have its faculties intact, and we can understand how she would long for her child's deliverance from her affliction, and this continued dread and mental distress would perhaps lead to the much deplored condition.

There is a current belief among women that an ungratified desire, what they term "a longing," is often liable to leave a maternal impression. A poor negress (laundress) gave birth to a child, diagonally across whose face there was a mark somewhat more than an inch in width and several inches long, terminating in a point on the forehead. When the mother saw this mark, she ejaculated: "If I could only had bananas," in explanation of which the grandmother informed me that during her pregnancy, she had a continual craving for bananas.

That a child is liable to be disfigured as the result of an unreasonable, perhaps silly, longing on the part of the mother, is not a pleasant thought, and now when the practical trained nurse is taking her place in the lying-in room, it is to be hoped that as the garrulous old mid-wife goes further into the back-ground, this longing superstition, which she originated, will fade with her.

In this consideration of maternal impressions we have taken facts as they stand and feel justified in claiming that any other theory would necessitate a much less reasonable explanation. At the same time to the question, how is this variation inaugurated? How without direct nerve communication a maternal mental impression, aye perhaps trivial, can be written, as it were, on the fœtus in utero, that will last with the life of the receiver? We must answer in the language of Du Bois Reymond, "*Ignoramus*" (we know not), "*Ignorabimus*" (we shall never know).

REFERENCES.

1. God and the Future Life, Charles Nordhoff.

2. Science and Religion, Bishop Vaughn.

3. Psychology, Vol. II., Herbert Spencer.

4. Christianity the Religion of Nature, Prof. A. P. Peabody.

5. The Cosmopolitan (March, 1899), Edmund Willson Roberts.

6. Gaillard's Med. Journal (Jan., '99), Prof. Chas. A. L. Reed, A. M., M. D.

7. Historia Rerum Scoticarum, George Buchanan.

8. Aristotle on the Parts of Animals, translated with introduction and notes by W. Ogle, M. D., etc.

9. Genesis, chap. xxx, verses 37–39.

10. Prof. Ellerslie Wallace, loved in the memory of so many Jefferson Medical College men.

11. Dr. John Janvier Black, New Castle, Del. (Dr. Black has had a large practice

and been much sought by other physicians in consultation for many years, and is probably the best informed medical man in Delaware).

12. Robert E. Bass, M. D., Rices Depot, Va.

The Practical Advantages of Modern Standardized Preparations.*

By F. O. Hawley, M. D., Charlotte, N. C.

It has been the custom hitherto to speak of "the art of pharmacy," but the numerous applications of scientific methods and principles to the materia medica of to-day make it now almost obligatory for us to speak of "the *science* and art of pharmacy."

It is not much more than a quarter of a century since the medical profession was made aware of the great variation which was manifested by many potent drugs in the matter of content of therapeutic constituents. This variation was found to be due to the action of so many causes that were largely beyond the control of man—such as heat, amount of moisture and other climatic conditions of growth, character of soil in which the plants were grown, weather during the gathering, changes occurring during the curing process, etc.—that it was long considered quite sufficient for the pharmacist to see that the drug appeared to be in good condition and that it was not too moldy nor too worm-eaten. Considerable elasticity, we may say, was practiced if not permitted in the judgment employed to decide the latter points.

When morphine, quinine, strychnine and the other alkaloids began to be isolated and used by themselves, instead of the crude opium or the crude bark, as the case might be, the manufacturers of these substances very quickly perceived that it would be money in their pockets to buy only such opium as contained at least 9% of morphine; that it was their loss to buy a cinchona bark that was deficient in quinine. Samples of these began to be bought, and prices accordingly ruled by results of analyses. Thus standardization was first instituted.

From this point to the securing of an analytical safeguard for opium for therapeutic purposes was but a step. If the manufacturers of morphine for the protection of their own pockets were forced to see that their crude opium was up to grade, it was demanded that pharmacists also should do so in the interests of medical science, when manufacturing their laudanum. Hence, opium preparations came to be the first to be made by truly scientific methods—the first to be "standardized."

Of course it is needless to say that pharmaceutical preparations of opium, before the official adoption of a standard, varied fully as widely in therapeutic effects as the opium itself varies in morphia; similarly so do we find many other powerful and important drugs (and their preparations) to vary, which have not yet had this process extended to them. To the medical profession, as onlookers, it appeared to be a hard fight against conservative know-nothingism, to secure the standardization of two additional drugs, cinchona and nux vomica, in the last edition of the U. S. P.

The trouble seems to be not so much that drugs are capable or incapable of being standardized, for the attainment of therapeutic accuracy, and the benefit of humanity in general, but that the pharmacists—who, by the way, have a good deal to say in editing the U. S. P.—feel that they, as a body, and on their small scale, are not able to accomplish standardization economically. Their reluctance to officially assist therapeutics in this matter is, therefore, felt by the medical profession to be an attempt to delay their "evil day" of confessing this inability.

If pharmacy in its standard work of authority, the Pharmacopœia, still hesitates to carry the good work forward, it is with much pleasure that we medical men see some of the more reputable manufacturing houses willing to meet us much more than half way in this matter. In addition to those already mentioned—opium, cinchona, nux vomica—there are for instance standardized preparations to be found on the market of Belladonna leaves and roots, calabar bean, coca, colchicum, root and seed, conium, gelsemium, hydrastis, hyoscyamus, ipecac, kola, podophyllum, stramonium leaves and seed, veratrum viride—all of them assayed by chemical methods.

If chemical tests involving comparatively little outlay in apparatus and comparatively little trained skill have been so slowly recognized as available to pharmacy in its presentation of medicaments, what prospects are there, pray, of the ready and willing adoption of physiological tests which involve much more capital and demand more elaborate technique? No doubt whatever now exists in the minds of the most competent chemists that only a physiological test is capable of discriminating therapeutic value in many drugs. Chemistry in many cases is either unable to discover the active principle, as in the case of cannabis

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indica, or to isolate it from others present when there is a plurality of them, as in the case of digitalis, aconite, etc. Of powerful drugs at present recognized as not amenable to chemical assay, may be mentioned aconite, cannabis indica, cantharides, ergot, digitalis, strophanthus, convallaria majalis, squills, elaterium, and probably others.

We believe that we may truthfully state that since the advent of the chemical test no more important advance has been advocated in the history of pharmacy than the physiological system of assaying drug products to which we have just referred. All honor to such firms as Parke, Davis & Co., who were the first to put this system of standardization into practice, and who already have large laboratories actively engaged in carrying out its principles. By this method the physiological effect of such cardiacs as strophanthus and digitalis are tested by administering them in fluid form to frogs and other animals, and subsequently vividly demonstrating their therapeutic value through the medium of Fraser's perfusion apparatus, and of graphic tracings on the Ludwig kymograph and similar instruments. The oxytocic power of ergot is demonstrated upon pregnant animals, and its related hemostatic action estimated by feeding it to cocks and noting the reaction manifested by the comb and wattles—an active drug being able to produce such action on the arterioles as to cause incipient or even complete gangrene of these parts. Cannabis indica may be physiologically tested upon dogs or other animals, and its therapeutic activity measured by the consequent staggering gait, loss of muscular control, reduction of temperature, etc., which it manifests, followed by insensibility. We might enumerate more, but these instances are sufficient to indicate the physiological channels by which medicinal action may be tested upon respiration, blood-vessels, kidneys, intestines, muscle fibre, nerve centers and nerve endings, etc.

As showing the importance to therapeutics which this new method possesses, we may be permitted to refer to a paper read by Dr. E. M. Houghton, before the Denver meeting of the American Medical Association, on "The Pharmacologic Assay of the Heart Tonics." In this paper are stated the results of a number of physiological tests of tincture of strophanthus found commercially on the open market. Considering the toxic value of the weakest as the unit (as established by direct test upon animals), the strongest was found to be no less than equal to ninety! Chemically examined the samples, we are informed, were not found to be appreciably different. This is equivalent to saying that a chemical test of such a drug could not differentiate between an inert and an actively toxic sample. If the patient had been receiving the weaker preparation and then had his prescription filled at another store or from a fresh bottle representing the stronger preparation, we would not wonder, as Dr. Houghton remarks, at it affording such a "splendid opportunity for a sudden termination of a favorably progressing heart disease!"

I would be simply wasting your time to dilate upon the advantages which accuracy and uniformity confer upon our materia medica, but if nature does not herself supply us with standardized drugs, let us, by all means, improve upon nature when the ways and means of doing this are so evidently within the reach of modern scientific appliances.

The convenience of modern pharmaceutical preparations when compared with the olden-time black draught, emulsion of asafœtida, and other nauseating mixtures and infusions, the majority of them without attempt at palatability, is certainly a matter for congratulation as well from the physician's as the patient's point of view. The blue pill and powdered opium were for a long time the most condensed representation of medicinal activity which the doctor could carry with him. Alkaloids and their convenient exhibition in every form of pharmaceutical embodiment have made the old saddle-bags of the country practitioner dwindle down in these latter days to the dimensions of a pocket-case. Nor can it be said that the condensation has been anything but a direct gain to therapeutics.

In the matter of elegance, pharmacy claims that her products of to-day are much better prepared and more palatably exhibited than they have ever been. Elegance, however, to our knowledge is not an unmixed blessing. If a newer method of exhibiting some familiar but disagreeable-tasting article, some new pharmaceutical, is brought to our notice, have we not a right to expect that the contents medicinal are not sacrificed to the *mistura grata* of the confectioner? We have seen cases where the amount of medicament claimed on the label was not to be found present even to the extent of 50%! A concern which is willing to falsify in one will do so in all products where it may dare to; but we cannot go farther into this matter without being tempted to instance some specific cases, and this is not our intention. Elegance and palatibility are however not always synonymous with therapeutic worth.

At this point we come to a decision with regard to our medicines similar to that

which our patients reach when selecting their doctor. We do not very frequently find them employing us if they have no confidence in our ability. Neither do we willingly employ preparations of the Materia Medica of whose quality we are doubtful, or in whose makers we have lost confidence.

But how, it may be asked, are we to learn of the manufacturers who make the best products? How are we to know that we are placing our confidence in the best preparation obtainable? Should we simply trust to our individual experiences? No, life is too short for that. Even our patients do not try us individually; they select us, generally speaking, because they have been recommended by friends who have had previous experience with us. We expect then, nay indeed, demand that the experience of the entire medical profession be made common property for the benefit of all.

This demand was but little necessary respecting Materia Medica when every manufacturer was on the same footing and all made strong or weak, good or worthless preparations of drugs just as the crude articles varied. When chemical standardization was initiated it became more necessary than ever that the profession at large should realize the benefit from standardized preparations should they be observed to posses the reliability claimed. Then followed the newer physiological standards of quality in drugs, which are not so readily tested by the average physician, consequently the responsibility rests upon the few, who have the facilities for doing so to make their worth known to the profession, that we may all understand what are the points of superiority which such standardized drugs possess. Lastly, come the blood-serum remedies for diphtheria, tetanus, etc. Only a very few can hope to thoroughly and scientifically test these preparations apart from the knowledge acquired in their clinical use, since such tests, to be of value, would require such extensive laboratory facilities as State or National institutions can alone provide. Collective clinical evidence, therefore, is all that we have to depend upon. Is it not then as much a duty, in reporting epidemics of diphtheria, for instance, to name the maker of the antidiphtheritic serum employed, as it is to report in the first place that serum itself was the remedy used? There appears to be a dread of advertising the manufacturer in such a case, when in reality the medical profession and the cause of humanity in general receive the greater benefit.

To give an instance of what I mean in this connection, let me refer to the official reports of the health boards of some of our large cities. I have in mind, as an example coming under my observation, the published experience of the Health Bureau of the city of Denver, Col. In 1895, when antitoxin was first used in that city, 7.3 per cent of diphtheria mortality was reported, many different makes of serum being employed. In 1896 the product of one maker only was employed and the mortality was 6.5 per cent. In 1897, the product of another manufacturer was selected and exclusively employed, and the mortality was reduced to 4.1 per cent. If some entirely new remedy had been employed that affected this 50 per cent reduction in mortality, the report would have enthusiastically praised the medicament and the name would have been given free publicity. Is it not equally as important a point of professional information to be told the brands of the antitoxin employed when they are found to differ quite as widely in efficiency? Are the good, the indifferent and the worthless antitoxins all to continue to meet upon common ground when human lives are in the balance, and especially when we may profit from collective experience if it be not denied us? No squeamish, false modesty should prevent such public statistics stating *all* the facts instead of only a part of them, when their publication is of so material value to therapeutics.

In conclusion, the scientific obligations of pharmacy and of pharmaceutical preparations to the science and art of medicine lead us to expect, if not indeed demand, that the "personal equation" of the manufacturer disappear from all the therapeutic weapons of our warfare with disease. Some of these we have seen to be extremely difficult to test before they are used at the bedside; so difficult that no private individual can be expected to do it alone. Our safest course, therefore, would seem to be the adoption of accurately standardized therapeutic products, from the laboratories of a responsible house, whose honest aim is to supply the medical profession through legitimate channels, with the best and most approved agents for the treatment of disease. Thus, alone, can we feel assured that we, as physicians, are giving our patients the benefit of all that science has done or can do to ameliorate human suffering and promote the welfare and happiness of the human race.

Marriage between epileptics is forbidden by the laws of Texas and Massachusetts. In the latter State syphilitics and alcoholics are also prohibited from indulging in matrimony.

A Report of Three Abdominal Sections on the Same Woman in Five Years. The Second being Cæsarean Section, the Mother and Child both Living.†

By S. W. Pryor, M. D., Chester, S. C.

Mrs. B. (white), age 31, (June, 1893). Three months after marriage was admitted to the Chester Sanitarium for the purpose of having a tumor removed. After a few days preparation she was operated on by Drs. Marion and Henry, assisted by myself. They removed a four and a half pound pedunculated fibroid tumor. It was attached to the fundus of the uterus, a little to the left of the center by a pedicle, about the size of the wrist. The stump was treated extra-peritoneal, and healed without a single interruption. She was sent home in eight weeks well and comparatively strong. Twelve months later (August, 1894,) she was delivered of a good sized boy child. Labor was normal, without a bad symptom following. The ventral fixation or abdominal adhesion of stump not interfered with.

Nineteen months from that date (1896) she was again delivered of a boy baby. This labor was normal also. July 7th, 4 A. M., 1898, she again felt herself in labor and sent for the family physician, Dr. B. E. Kell. He came and on attempting to make a vaginal examination found it impossible to enter even the index finger without considerable force. Further examination revealed a tumor almost filling the vagina. Realizing that something had to be done or lose the mother and child he wrote me a note stating the facts. I, with Drs. McConnell and Lindsay, drove fifteen miles and arrived at the patient's home at 2 o'clock P. M., same day.

I examined the case carefully and found it out of the question to remove the tumor per vagina, as there was a larger bulk of it above the brim of the pelvis than down in the pelvis.

Cæsarean section was decided upon, and patient prepared in the usual way for laparotomy, anesthetised with ether and put on the table. I made the incision on the right of the median line, one inch from the old scar, beginning about two inches above the umbilicus, extending down about ten inches. After entering the abdominal cavity, examination revealed a very large tumor attached to the posterior and lower two-thirds of the pregnant uterus. I decided that it would not do to try and remove the child and tumor both for fear of losing the mother, as the time it would have taken and the loss of blood would necessarily cause more shock than the patient could have stood. Thinking the tumor was attached to the uterus by a fibroid attachment as well as adhesion, I decided to remove the ovaries with a hope of the tumor atrophying and saving its being removed later. I, with the assistance of Drs. Kell and McConnell, elevated the uterus out of the abdominal cavity, so far as we could, as the abdominal adhesion due to the first operation was holding the upper end, and the adhesions and tumor to the lower end, made it very difficult. The ovaries, just at this stage of the operation, being very accessible, was ligated and taken off, after which a rubber tube was passed around the uterus as low down as the tumor would allow, (by my third assistant, Dr. Lindsay,) and was crossed and held at each end until he was requested to tighten it, at the same time sterilized gauze was packed around the uterus to prevent amneotic fluid from draining in the abdominal cavity. Now, with one swipe of the scalpel, I laid the fundus of the uterus open for about eight inches. This incision was to the left of the adhesion attached to the fundus and abdominal wall, at the same time the rubber tube was drawn tight enough to cut off the flow of blood from the incision. Instantly dropping the scalpel, I delivered the child and placenta. The child was handed to Drs. Marion and Wylie, who soon resusitated it and dressed the cord, etc. I proceeded to wipe out the uterus and put iodoform drainage down through the os. After this was completed I sutured the uterus first every half inch with strong silk sutures, extending down to the endometrum, then I placed a Lembert suture, of medium size silk, in the peritoneal coat over and between each one of the former sutures. She was closed without drainage, with the through and through silk worm gut suture, wound dressed with iodoform, iodoform gauze, cotton and flannel bandage.

She was put to bed with a very good pulse, in fact a very encouraging condition all round. She was after this looked after and treated by the family physician, Dr. Kell, who deserves a great deal of credit for her smooth and rapid recovery. She was up and about the house in six weeks, though she noticed that there was a growing distention of the abdomen, and began to suffer with pains in the left hip and lower part of the bowels, the pressure was so great against the rectum that the motions had to be liquified with enema of hot water and glycerine before she could relieve herself. This passed on until about three months had elapsed since the cæsarean section. I was again

†Read before the South Carolina Medical Association, April 5, 1899.

called to see her and decided that the removal of the tumor was inevitable. After a few days preparation she was again, and for the third time, prepared in the usual way, anæsthetised and put on the table at her home as before.

September, 1898, this time with the same assistance made the incision on the left of the median line, one inch and a half from the first incision, beginning opposite the umbilicus, extending down within two inches of the sympathis-pubis.

After drawing the incision open with retractors it revealed a much larger tumor than we had left there three months before, though soft instead of hard. After locating the uterus, which was very easily done, by tracing down the right side of the abdominal wall and finding the pedicle attached to the fundus and abdominal wall, result of first tumor; we then turned the patient on the right side and with the scalpel opened the upper end of the tumor, letting out two gallons of decomposed fibroid fluid, the opening was then closed by a medium size broad ligament clamp, I proceeded to separate the tumor and uterus which had become more intimately adhered by adhesion extending over the entire uterus. After freeing all of them the tumor sack was removed, though in separating posterior wall of the tumor sack from the intestine it was found that one of the large intestines had become gangrenous for about two inches on the side attached to the tumor. This was pared off with scissors, then closed with twelve Lembert sutures. Now the uterus was removed by first ligating each uterine artery, applying broad ligament clamp on either side, then the uterus was cut out, leaving about one inch of the cervix, and quilting it over with silk.

I now pass it around to show you how important it is to make Porros operation (which is my preference) when you can. As you plainly see that such a bunch of silk would be better out of the abdomen than in it, besides it leaves a good place for more adhesions, and that means more trouble. It is useless to tell you that I would have made Porros operation at first, had not it been for the tumor attachment, and, of course, would have necessitated my removing the tumor also, which I did not consider prudent at this time, as I stated before. She was washed out several times with normal salt water, iodoform gauze drainage put in, incision closed with silk worm gut, as in previous operation, the dressing was the same also. She was put to bed in a fair condition, pulse good, but extremities a little cold. I advised hot bricks to be put in the bed; this was done, though to my sorrow, as they put one against the plantar surface of the left big toe and burnt it to the bone. This, of course, gave her a great deal of pain and trouble, especially when she began to walk around, though it is now entirely well.

Abdominal wound healed very nicely, but about the fourteenth day we found some little suppuration going on just at the lower end of the incision. This was opened and a considerable quantity of fluid escaped, though by no means an offensive fluid. I attributed this suppuration to infection from the opening in the intestine that allowed an escape of fæcal matter into the abdominal cavity, before it could be prevented. There being so many ends of adhesion that had been torn and tied off that it was very difficult to wash them antiseptically clean. With this exception, and the burnt toe, she made a very smooth and quick recovery, and at this time is enjoying good health, with a bright nine months old child on her lap. I will pass a few of their photographs aronnd that you may see them.

Now, gentlemen, I have done my best to give you the exact clinical report of these operations, and hope you will pardon me for consuming so much of your valuable time, and thank you for your kind attention.

The Care of the Digestive Tract in Tubercular Patients.*

By H. J. Chapman, M. D., House Physician Winyah Sanitarium, Asheville, N. C.

One of the most important predisposing causes of turberculosis is the lessening of the natural resisting power of the organism, and this is but another way of saying that the nutritive processes are deficient.

If such a state is not apparent at the onset, the subsequent pathological changes tend strongly toward it, and invariably increases it if already present. Indeed the prognosis in a given case very often depends upon the patient's ability to assimilate food in sufficient quantity not only to supply the demands upon the system each day, but also to increase the amount of defensive proteids for that individual. Many cases with only a moderate amount of lung involment fail to recover for the lack of assimilative power. With a good stomach, our chances of success are favorable. Without it we can do little or nothing, no matter what may be our method of treatment of the tuberculosis. Among the various

*Read before the Buncombe County Medical Society, at Asheville, N. C., March 20, 1899.

causes that give rise to defective nutrition improper feeding stands at the head. In many instances this fault, commenced early in childhood, tends to gradually impair digestion and assimilation, and though perhaps not to such a degree as to occasion any serious alarm, yet sufficient to account for a greater predisposition to the infection of tuberculosis. Habits of excessive use of sweets, appetizers, and articles of difficult digestion, lay the foundation for impaired health in later years, and when the individual is overtaken with disease, the first functions to show impairment are those of digestion and assimilation. When in the presence of the disease under consideration we desire to increase the amount of food, we are very apt to over-crowd the digestive organs, which rebel, and indigestion occurs. These attacks last from a few hours to several days, during which time little or no food is taken, and we lose more than has been gained by the forced feeding. A repetition of such attacks frequently leads to cartarrhal gastritis, and then the increased secretion of mucus and the fermentation of the food, lead to further changes in the mucus membrane, and sometimes in the muscular coats of the stomach, which eventually become chronic and extremely obstinate to treatment.

All such cases require careful individualization and regulation of diet. In some the amount of simple and very digestible food may be pushed even beyond the patient's desire for it. In others we must proceed with great care and avoid any temporary reversals and thereby loss of weight which is always an unfavorable symptom. But in those cases where the disgestion is still good, the possible impairment that may result from excessive feeding, improper food, internal medication, or alcoholic stimulation, must never be lost sight of. Our first duty is toward the preservation of good digestion and assimilation.

Speaking now more particularly of the causes of impairment of the digestive functions, aside from these which arise from improper feeding, I will call your attention first to the use of alcoholic stimulants. I am aware that I shall not meet with a concensus of opinion on this subject, for many physicians see in alcohol not only a stimulant but also a food; perhaps because they have seen some old toper who has lived a long time with his tuberculosis, or has even partially recovered from it. We have all seen such cases, neverthless one should not lose sight of the fact that alcohol is a stimulant and only to a limited extent a food, and that its injudicious use is known to be harmful. It is therefore not the question how well some patients may get along under abuses, but what will be the best for each one under our care. I do not wish to be understood to be entirely averse to the use of alcohol, but I hold that its use should be limited to those cases requiring a stimulant.

There are some cases where small doses of alcohol increases the appetite and stimulate digestion so that more food is taken and assimilated. But as soon as our purpose is accomplished the alcohol should be discontinued. We have other drugs that for continued stimulation are to be preferred to alcohol, and we can afford to reserve the latter for emergency. I refer more particularly to strychnine and camphor. Camphor has a special value on account of its tendency to lower temperature. It is best given in does of one-fifth to one-half grain dissolved in olive oil and administered hypodermatically.

Among remedies which endanger the digestive function next to the abuse of alcohol, I would place creosote and its derivatives. It is true that small doses of creosote preparations seem to stimutate digestion and to prevent fermentation, and that they may be given with benefit for a considerable length of time; but it is equally true that as we increase the doses we soon reach a point where in many cases digestion suffers, and we are forced to discontinue the drug until the stomach recovers its tone. The first few attacks of indigestion so induced are usually of a mild type and readily yield to simple suspension of this exciting cause. Subsequent attacks from the continued use of the drug are however more serious and usually give rise to structural changes in the mucous membrane and muscular walls of the stomach. Atrophic gastritis is not an uncommon result of the continued use of creosote. Indeed some of the worst cases of gastric catarrh which have come under my notice were induced by creosote and their pecular obstinacy to treatment, including lavage and electricity, has tempted me to distinguish them as creosote catarrh.

The difficulty of giving creosote by the stomach in large doses, supposed to directly influence the tubercular disease,led many physicians to administer it hypodermetically; and those who still believe in its power to influence tubercular disease should certainly adopt the hypodermatic method of administering it, which is entirely painless even when given in full strength. Iodine and its salts are equally injurious to the digestive tract, but fortunately have fallen into deserved disuse, although there

are cases where they are valuable expectorants.

Opium and the various mineral and vegetable expectorants which form the base of the many popular cough syrups, are often accountable for at least a part of the gastric disturbance in this class of patients, and it would be well to bear in mind that most expectorants are emetics if given in sufficient doses, and the greater part are distinctly irritant.

In summing up these few remarks, I desire to emphasize the fact that one of the most important points in the treatment of tuberculosis either in its incipiency or in its more advanced stages, is the care of the digestive functions, and that the physician should never himself contribute to their impairment by medication through the stomach with remedies which experience has shown to be capable of doing harm to those organs. It is a good rule to follow in the choice of remedies in tuberculosis to be governed by their effect upon nutrition; if favorable they should be continued, if not, their use should be forbidden, unless the indications for their employment are transient or extremely urgent.

DISCUSSION.

Dr. J. H. Williams.—I have listened to the doctor's paper with a great deal of pleasure. Errors in digestion and errors in assimilation are at the bottom of our failures to treat properly and successfully troubles of tuberculosis. I have always made it my rule to inquire particularly and especially into any error of digestion, to find whether or not I had any condition of atony of the stomach or of the glands of the stomach, whether or not I had fermentation with production of lactic acid, and any or all things indicating a departure from a proper condition of the stomach, and then, further, to trace the digestion after leaving the stomach into the intestines, to find out what sort of intestinal troubles I had.

As to the effect of forced feeding, that will depend very largely upon whether you have an atonic condition of the stomach. We can, by the use of our digestive aids, pepsin, hydrochloric acid, etc. ,increase our patient's ability to take care of the food entirely beyond the capacity of the system itself, but I am sorry to say we cannot keep that up very long. Some years ago my attention was drawn to the internal administration of ichthyol. Under that I found a stimulating effect upon the glands of the stomach, I found I was able to accomplish more in the way of intestinal digestion, and under the influence of moderate doses I found I got better assimilation of food, and an increasing weight, which is very much to be desired always in combatting the great white plague. I have used creosote. I use it now. I use some of the later chemical successes in the way of eosote and geosote, and carbonate of guaiacol, and I think with much better success than the crude creosote itself. As I said, I have a certain amount of success through the use of ichthyol, simply because it improved the condition of the whole digestive tract. I found in my practice that where I had a catarrhal condition of the stomach that turpentine, one of the natural products of North Carolina, was one of the finest stimulants in our therapeutic list. A combination of pancreatis, pepsin and turpentine, given in proper doses, will accomplish some times more than any remedy I have found. I do not know in cases of tubercular diarrhœa, or what is sometimes called catarrhal diarrhœa, that this preparation will control this diarrhœa. I have found that it does stimulate the absorption of food. I have found under the administration of it that my diarrhœa subsided. I found that often a turpentine mixture took the place of alcohol. I have long since ceased to prescribe alcohol in any way for tubercular patients. I have found that turpentine absolutely takes the place of alcohol as a stimulant. As to camphor—I have never used it. I have used camphoric acid for night sweats. I have never used camphor for special effect upon the digestive tract. A careful regulation of the patient's diet is, of course, the first thing. To allow patients to select a diet for themselves and to say they cannot eat what is prescribed is all nonsense. We know if we carefully study our patients we can give them a diet that will be in every way conducive to their welfare. We run over the gamut of various foods. I am speaking of eggs and milk, and rare roast beef, fish, mutton chops, lamb cutlets, and things of that sort. Those are the things our patients need to build up the tissues that are torn down and destroyed by the action of the tubercular bacilli in the body, and by the destructive process caused by the high temperature, and I think, by studying our patients carefully, and varying his food from day to day, that we can force feeding in that line.

Dr. C. P. Ambler.—There is not very much left to say, except to endorse what has been said. I can heartily endorse everything that both physicians have said. There is no doubt that the digestive tract occupies, if not first, at least very near first, place in the treatment of tuberculous patients. I look upon tubercular patients under three heads; first, hygienic care, second climate,

and in the third place medication. I believe a patient will do better under good hygienic supervision than he will under anything else, and if it is a question of sending a patient away from home simply for the benefit of the climate, or of keeping him at home and looking after his general hygienic life I certainly believe the physician would take the better course if he would keep his patient at home and look carefully into his hygienic life. Another thing is where the patient is sent away from home with directions for certain medication, and in the meantime with no care as to his general hygienic condition. A great many of the patients who come here, and also to other resorts, are practically without the care of a physician. They come and go as they please. Many of them are far advanced. I sincerely believe that these people would be better off at home with the right kind of hygienic care than they would in the climate of Asheville and under the medication of a physician. Medication occupies but a small place. The question of diet is a great one. Dr. Chapman went very carefully into the catarrhal condition of the digestive tract, and there is but little I can add. In the first place, as to the time of the heaviest meal. Take our tubercular patients running a high temperature. Sometimes they are having a temperature of 100, 100 1-2, 101 or even higher. I believe that if this patient has high temperature from one to three or four in the afternoon he must not be allowed to eat his heaviest meal from twelve to one. It is a well known fact that the stomach is not going to take care of a solid food when the patient is running a high temperature. Let the meal preceding the high temperature be a light one. Another mistake is as to the amount of time allowed between meals. Many of our boarding houses have their breakfasts between nine and ten, dinner at one, and many have their supper early in the evening. This is all wrong. If we expect a patient to digest his meal and assimilate it, I believe we must have five hours between meals.

In regard to creosote, I endorse what Dr. Chapman has stated, and I believe I go a little further. I formerly used creosote with the rest, but have almost discarded it. A great per cent. of the tubercular patients I have give a history of creosote poisoning. Many come here with very little assimilation and give a history of creosote poisoning. I believe that creosote will answer certain requirements. I believe it will reduce temperature to a certain extent. It may have some influence upon expectoration, but this thing of pushing the creosote up as high as the patient can tolerate is not only nonsense but ridiculous. Sooner or later it ruins digestion. If you are going to make a rule of either pushing your creosote or giving no creosote, I certainly say give no creosote, and I think the same holds true of almost any internal medication. I find the less the patient puts in his stomach the better he gets along.

As to alcohol, I do not believe I agree with Dr. Williams in not using it. I do believe that alcohol fills the bill in many of our tubercular patients, and I do not mean by that the taking of large quantities of it. As a rule, those who run a high temperature late in the day have a corresponding low temperature early in the morning. I believe that alcohol at that time, in the shape of an eggnog or even a hot toddy, stimulates the patient and puts him in better shape for his breakfast, and he will get along better throughout the day. I also believe in the use of pepsin, but in very few cases. These pepsin preparations are simply to help the tide over. The usual prescription I believe is to take a certain amount after meals. I get a better result by giving a tablespoonful to an adult one minute after meals, repeating an hour and a half later.

Dr. J. A. Watson.—We may talk as much as we please about diet, which is the sheet anchor in the treatment of tuberculosis, but what are we going to do with our boarding houses which furnish the diet. Take these people that come here from all over the country and are turned loose in the boarding house, and the boarding house keeper has no more conception of what is needed than a Hottentot. Some of them even spend more money than they take in in their earnest efforts to please their patrons. I think if we could have some diet of very little expense and dispense with all this worthless thing they do have we would be accomplishing some good. What course we would pursue to accomplish that I don't know, but I think the medical men of Asheville ought to be able to devise some means. In the resorts in Europe the diet is prescribed, and if the boarding house people do not conform to the prescribed diet of the physicians they do not get any patrons. If a lecture on this subject could be written out and put into the hands of these people we would simplify their methods and reduce their expense. Many of these boarding houses set a more elaborate dinner than some of the hotels, and yet when you eat everything they have on the table you do not get any nourishment.

Dr. M. H. Fletcher.—Along this line I have been very much interested in an in-

stitution started in Massachusetts under the control of the State, which takes patients and prescribes a regular diet, and feeds them oftener than we feed our patients, and so far the reports seem to bear out the recent thought on this subject. The institution, as I understand, is run at a loss. Every one is required to pay a certain amount, but it costs more to run it than the amount required to be paid. From what I can learn the results are most marvelous. It is located in a healthy locality. The diet is not the only thing. They depend also on air and exercise. The patients are required to get up early in the morning and have something to eat. It is located somewhere outside of Boston, and under control of the State of Massachusetts.

I don't agree with Dr. Williams entirely about alcohol. I think a few patients can drink alcohol and get along well on it, and others cannot take it. Where it is pleasant and agreeable and aids digestion I think we ought to give it. I always prescribe it for my patients if it is agreeable, and it does good up to a certain point. When we get it beyond that it is doing harm. How turpentine can take the place of alcohol as a stimulant I cannot conceive. You can't get it in them. They don't take it, and when you do get it in them it is going out through the kidneys and skin.

Dr. James Sawyer.—One point I would like to mention is that of getting your patients in the habit of taking regular, systematic exercise. Of course there are many systems, but I think if we make each one take at least a certain amount of exercise we will aid ourselves and the patients too; and of course, after all, it is reduced to one thing, individuality. You must treat each patient by himself or herself. We cannot lay down any cast iron rules. We can give alcohol or creosote to some and others we cannot. But first of all, as the doctor said, hygiene comes in, and of course the climate with it.

Dr. L. B. McBrayer,—I have enjoyed the discussion very much, and believe that it has been the most practical and at the same time most scientific discussion that I have ever heard here on the subject of tuberculosis. I am heartily in accord with most of the views expressed, and I will just tell a little story with regard to alcohol. On one occasion, when I was a medical student in Louisville, I went out to Kentucky, and on the train happened to meet a physician, and he advanced the idea that alcohol was the specific for tuberculosis, and I laughed a little, and he went on to cite a case or two that happened to fall under his notice where the patient filled up and proceeded to keep full and got well, and he was prescribing that mode of treatment regularly with great success. But one great trouble in the treatment of tuberculosis in this town among a certain class of patients is the advice given them by physicians before they leave home. I agree thoroughly with Dr. Ambler and others who have expressed themselves as to the order in which the different treatments come, hygiene first, and under the term hygiene I should class not only the foods but I should place exercise and the amount of exercise and the time exercise should be taken, and all those things, as Dr. Sawyer has touched upon. Then next would come climate, and last and least, medication. I am sorry to be of the opinion, but I am, that we have not found the specific nor the panacea for tuberculosis yet. But as I said, one great trouble that we have in treating patients here was the advice given them by physicians when they are sent here. It seems to be the opinion of a great many physicians that all they have to do is to send a man here and let him take in the ozone and get well. Steer clear of the doctors. And the doctor at home continues to write to them and tell them to take the creosote and cod liver oil probably and take exercise, and above all things those men need is to consult a good physician and get advice as to what they should do with themselves, and how to do it. Asheville climate is a good thing, but they need some good doctors along with the patients every time.

Dr. J. A. Burroughs—

I have been very much interested in the discussion. I have never listened to a better discussion, in particular, that of Dr. Williams' remarks. He has covered the ground very thoroughly. I fail, though, to understand how a dose of turpentine will compensate for a dose of whiskey. There is no question in my mind about every case of tuberculosis having its origin in malnutrition, and one of the first things we have to do is to see that the food is properly digested and assimilated. This is frequently a difficult matter to accomplish, from the simple fact that we already have tuberculosis of the stomach and intestines.

I must differ with Dr. Ambler in regard to creosote. I have found no one drug in the treatment of tuberculosis that has afforded me so much benefit as creosote, and I think that Dr. Ambler's dissappointment in the management of cases of tuberculosis with creosote has been due to the fact that a poor grade of creosote was used. I have found the same condition of affairs existing in patients who have come under my care that had been on creosote, they thought,

had really been taking nothlng but carbolic acid. I have found stomachs irritated and kidneys torn all to pieces with carbolic acid, when they thought they were taking creosote. If you will use Morson's Beechwood Creosote, made from the *distillation of beechwood tar*, you will get rid of the irritating properties possessed by commercial creosote, and get all the antiseptic and germicidal properties of the drug. By giving this creosote you increase the oxygen carrying power of the blood corpuscles. You get a direct effect upon the mucous membrane of the alimentary tract. Besides, this creosote is largely eliminated by the lungs, and you get a direct effect where you want it. There is another point. In nearly all these cases of tuberculosis, if they have been standing for any length of time you will have some tubercular trouble with the kidneys.

In regard to giving Morson's Creosote, made from beechwood tar, some patients will take more than others. I have a patient to-day taking 90 drops of this creosote. She has come from 84 lbs. to 153 lbs. and is now teaching school. She had laryngitis so bad she could not talk so you could hear her across this room. Now she can talk through a telephone, or talk to her class. She says she feels better in every way.

All patients will not assimilate creosote. I find ichthyol a valuable adjunct. But when we find patients who have a very feeble stomach and very feeble digestion, and you cannot get them to take much medicine I rub them with pigs lard, rub from a quarter to a half pound into them every day and practically rest the stomach. I have put to bed patients who had a high temperature and whose stomach would not digest food, and rubbed them with this, some times as much as a pound, never less than half a pound, and they have not only held their own with practically no food in their stomach for days and days, but they have gained weight. I have never gotten any results from cod liver oil or olive by inunction, but I believe we have, in a majority of cases, in pigs lard something superior to almost any nutrition we have.

I believe that the prejudice against creosote is for the want of the proper knowledge of the kind to give. Morson gives his formular to the United States Pharmacopœia and strange to say, they cannot make this creosote. Although Morson says: This is the formula, chemists have been unable to make it. If you will look up the United States Pharmacopœia you will find the above statement. I cannot explain how it is, but it is a fact that the skin takes up this pigs lard and it is evidently appropriated because the patients hold up, even weigh more after three or four weeks treatment than they did when they went to bed.

Dr. C. V. Reynolds.—I want to emphasize the point brought out by Dr. Battle in regatd to the mixed infection. I think in nearly every case we have mixed infection to a certain extent. By means of these antiseptics I believe we have an antiseptic effect directly upon the streptococci destroying them, thereby aiding the white corpuscles to tackle these tubercular bacilli, and aid is the very thing they need. We have never yet found anything that will destroy the tubercular bacilli in the body. I read an article in some magazine about atmospheric conditions of tubercular bacilli. I believe it stated that in the higher atmospheric conditions the tubercular bacilli found on the walls of the various hospitals were gotton and injected into a guinea pig, and failed to induce tuberculosis making the statement that tuberculosis was not communicable in higher climes.

Dr. Chapman.—There is not very much more to say. I have appreciated the remarks made very much. I agree with Dr. Watson in this, that I think all diets should be prescribed, and I think it is much more important than to prescribe medicines. I think the patient should be told not only the kind of his food, but the amount, and I think we should lay out a diet and see how it affects them, and I think the boarding houses will very soon get to the point where they will adopt that. We find that the diet of a great many patients, especially young girls has been pickles and preserves and condiments, and when we want them to take beef or mutton or chops they say they do not want them. They want chicken salad and that sort of thing. There may be something in that, but the average stomach cennot stand it. I believe much of the benefit gotten from lard is from the massage. When the circulation is bad we are not going to get much assimilation, and I think the massage helps us there.

An elegant method of giving bismuth in the treatment of infantile diarrhœa, that of dysentery, phthisis or typhoid in adults, is to prescribe bisol in solution. It is more efficient than the older bismuth salts in all gastrio-intestinal disorders and is prescribed in smaller doses. Combined with salicylic acid, it forms a salicylate of bismuth more powerful than any heretofore known.

Dress as a Factor in the Causation of Catarrhal Diseases.*

By C. P. Ambler, M. D., Asheville, N. C.

The increase in the number of drug manufactories, and the great amount of time and thought expended by our chemists and physicians upon the production of new drugs, of simple or complex formulæ, goes to prove to a great extent that even with these later scientific productions we are in a certain measure, still striving after something which appears about as far in the distance as we advance, viz.: health. We are able to cut short the course of certain diseases, we no doubt are more successful in the lessening of pain, and probably our mortuary tables will show a balance in our favor over that of our forefathers, but we must admit that in our hurry to cure disease, in our attempt to reduce and allay the symptoms of certain maladies, we are, many of us, not doing our full duty toward our fellowmen, in not making our greatest aim toward preventing disease rather than curing it.

Our State and local boards of health are awakening to their duty all over the land, and while they are cleaning our streets, seeing to our water supply and sewerage, and attempting to give us the greatest possible hygienic surroundings, we as individual physicians should strive to demonstrate the cause of certain maladies due more particularly to ignorance on the part of the individual regarding his own personal needs.

There is no doubt but what the most common illness in our country is that acute catarrhal condition of the upper respiratory tract, which is commonly called a "cold." Moreover, it is the repetition of this condition which frequently lowers the vitality of the patient to such an extent that the more serious disorders of the tract mentioned, follow what was in the beginning, simply the manifestation of some hygienic irregularity on the part of the patient.

In this paper we do not propose to discuss all the factors in the production of a cold, and neither do we intend to enter into what actually constitutes a common cold, but only to refer to one cause and give a few facts as they have appeared to us during the past few years; I refer to the question of clothing, and more particularly to that which should be worn next the skin.

It is a well established fact that disorders of the digestive tract usually precede a common cold. In other words, when secretion and excretion are interferred with, the patient becomes very susceptible. As physicians we have all recognized this, and yet how many of us give sufficient thought in this connection to that excretory organ, the skin.

Whether man's skin required more protection in ages past is an interesting question, but one we do not need to discuss. We have got to dress him as we find him now, and considering how fashion demands of him that he live the greater number of his hours in over-heated and under-ventilated rooms, dressing him scientifically and comfortably becomes a question none too insignificant for even an able body of scientific physicians to discuss.

We are taught that the function of the skin is manifold, and among the most important functions is excretion and the loss of heat by either radiation, evaporation, or conduction.

The production of heat is constant, as is likewise the elimination. This elimination takes place in most part through the skin.

The old experiment of varnishing the skin of an animal and noting how rapidly death ensues, proves to us that the covering we apply to the greater part of our body should be selected with a view to assisting rather than retarding the functions of the same.

The person who wears flannel in the winter time to keep the heat *in*, should theoretically wear the same in the summer to keep the heat *out*. In doing this, however, he would be interfering with excretion and evaporation, from the fact that wool is a poor conductor of moisture, and the excess of heat produced in the body in summer is lost both by radiation, evaporation and conduction, we would necessarily have increased evaporation to the point of perspiration; now, as wool is a poor conductor, the surface of the skin remains moist, the person is bathed more or less continually in moisture, this macerates his skin, softens it, if you like, weakens it certainly, and, moreover, as his underclothing cannot freely conduct the moisture outward, it interferes with excretion, evaporation and radiation.

The same thing holds true in winter. Wool underclothing retains heat, but also retains all those impurities in and on the skin which should be lost by evaporation and conduction.

We have said that wool is a poor conductor of either heat or moisture. It, therefore, fills the requirements perfectly for outside winter clothing. It retains heat and protects our body from damp cold air, but if placed directly upon the skin will be

*Read before the Buncombe County Medical Society, April 3d, 1899.

found absolutely lacking in the requirements it so admirably fills when worn over some better conductor of moisture.

Woolen underclothing becomes saturated with perspiration as all can attest, but this does not prove that it is a good conductor. The simple experiment of washing one's hands and attempting to dry them upon a woolen cloth shows that wool has but very little affinity for moisture. To go further, when under excessive exertion or overdressing, the woolen underwear does become damp, this same woolen underwear has very little power to give up the moisture; consequently both moisture and excretion are retained upon and near the skin, wherein if the undergarment was a better conductor, evaporation would be more rapid.

It is the person who habitually keeps his skin moist and surrounded by such excretion and damp retaining underwear who always feels every draught. He piles on more clothing in the fond belief that by so doing he is to keep these draughts from reaching his body. The more he piles on the more he aggravates the trouble, and is it any wonder that where the skin is thus macerated, kept damp, and where cutaneous excretion is interferred with, that disturbances of circulation and nutrition manifest themselves upon the most exposed mucous membranes?

A "draught" to our patient simply means that he is presenting a limited area of his cutaneous covering to air in motion; this same cutaneous surface being in a more or less humid state, by cause of the relaxation of the vasor motors of the greater part of the body following excessive coverings. Rapid evaporation results with the necessary marked abstraction of heat. Such a state of affairs continuing over a limited area while the remainder of the skin is bathed in moisture, results in disturbance of circulation in the part and organs adjacent; following this disturbance of circulation, nutrition is interferred with and various inflammatory results follow.

I well remember the first time I saw an old Indian hunter determine the direction of imperceptible wind, simply by moistening his finger and holding it over his head. The increased radiation with temperature loss on the windward side thus instantly reveals the direction of the air current.

Our patient who finds a "draught" does the same thing under different circumstances.

When wool is placed next the skin it does produce a feeling of warmth and comfort, and this will continue so long as the evaporation from the skin is not so rapid but what the wool can absorb the moisture and again free it; but under increased exercise or where great radiation of heat, as in summer time, causes a much greater relative humidity of the air next the surface, the wool fails to absorb as rapidly as elimination takes place from the body, and evaporation and radiation from the skin surface become greatly interferred with.

The protective feature of underwear is always dependent upon its air holding qualities, or in other words, upon its porosity, while at the same time having the power of readily conducting moisture.

The woolen garment has the porosity, but is entirely lacking in the moisture conducting quality, hence it retains heat in winter very well as long as the person avoids perspiration. When once perspiration has resulted, and the underwear becomes damp on account of its poor evaporative quality, it then becomes a good conductor of heat and the person rapidly eliminates heat to a point of detriment. The woolen underwear in the meantime is slow to dry and the rapid heat elimination is prolonged, hence the wool, which under normal condition was a good protection becomes for the time being exactly the opposite.

Again, in summer, wool under normal conditions will *keep out* heat because it is a poor conductor, but let the garment become damp and the heat conducting quality increased by presence of the moisture and the garment becomes almost unbearable.

Engaged as I am, in a practice limited to diseases of the respiratory tract, I have for years noticed that "colds" were in great part the result of improper dress.

We have chronic catarrhal conditions due, of course, to nasal deformities and constitutional diseases, but in my opinion the great number of the cases of simple catarrh of the nasal mucous membrane are, in a great measure, the result of some improper dress.

This is also one reason why these cases are so unsuccessfully treated by local applications.

Moreover, in a practice composed largely of tubercular patients, I find they invariably give a history of repeated colds preceding their tuberculous state; meaning that these colds have produced a ripe condition for infection.

Further, in no class of people do I find that proper underwear is a necessity more than among my tubercular patients. They particularly are daily liable to more or less sensible perspiration, and no matter whether in winter or summer they are invariably better off without wool underwear.

I make this statement well knowing that

certain of my professional friends (See Dr. Minor in the N. Y. Medical Journal, January, 1899,) advise wool the year around. I formerly did myself, wore it too, and stand ready to-day with Dr. J. H. Tilden, of Denver, to apologise to the many unfortunates I have so advised.

But I hear you ask: "What shall we wear?" I am indebted to Dr. R. H. Babcock, of Chicago, Ill., for many professional pointers, and it gives me pleasure to state that it was upon his advice that I first abandoned wool as underwear and adopted linen.

In linen, we have a woof which, if properly woven, fills all the requirements. By properly woven I mean if it is so woven as to be porous.

In such a garment we have a perfect conductor of moisture and, moreover, one as free to give it up. It is true that the fibre of wool and the fibre of flax show no difference so far as the conducting of heat is concerned, and a porous woolen garment will keep the body much warmer than one made of plain smooth linen, but offers no better protection against the loss of heat by radiation than a porous linen garment of the same air holding capacity.

The ancients understood perfectly the wearing of porous linen underwear. Particularly in Greece, Egypt and India, such garments were worn almost exclusively thousands of years ago. It was worn by the Anglo Saxons, and the Mormons are also so credited.

Hippocrates states that "pure linen should be worn next the skin," and Moses states the same.

In Russia, one of the coldest countries, very few inhabitants wear anything next the skin but linen, while foreigners wearing wool are forced to make the change when residing long under such conditions.

The difficulty in weaving linen has been always to make a garment that would be porous, but this difficulty is now entirely overcome.

In this country, at least, the common and extensive use of woolen underwear is caused in great part by the judicious use of printers' ink, and of late years has become a fad, many of our most reputable physicians falling into the way of advising the same, without having ever fully investigated the merits of other fabrics.

I expect to be "jumped onto" here in this meeting for advocating anything so radically different from what is custom, but I want to say I am fully prepared to take the stand I have, and am here to confess that I relieve more catarrhal cold sufferers, since adopting linen than I have ever been able to do before.

I am not arguing from theory, but from practice, practice in the case of myself, my child, my brother, my friends and my patients, having, during the past two years, put some 70 patients in linen underwear, and in not one single instance have I had cause to regret it, or had a word of complaint from the patient. They invariably declare they would not return to wool for anything; they wear fewer wraps, lighter clothes, and particularly they cease to have "colds."

I have changed the underwear of children 7, 8 and 9 years old, and of men above 60, upon our coldest winter days, and so far without bad effect.

Linen when first put on gives the skin an impression of chilliness, but this almost instantly passes off and leaves the skin in a glow, a feeling which must be tried to be appreciated. Moreover, it is absolutely non-irritating, and persons to whom wool is a torment, it is a comfort.

It is particularly indicated in those who perspire easily, from the fact that it absorbs rapidly and dries just as readily.

One of the most convincing arguments in its favor was told me by a gentleman, one of those unfortunates who perspire freely, who noticed that if he wore wool underwear for a week, bathing daily, that at the end of this time there was always an odor about the woolens. He now states that in wearing his linen he has never noticed such objection, thus showing that the woolen retained certain excretory matter.

Linen does not shrink, and if properly washed will outlast any other form of garment.

Engaged as I am in tubercular work, the treatment of rheumatism is something I rarely have to prescribe for, but to my certain knowledge there are some forms of rheumatism which are almost instantly relieved simply by taking the person out of flannel underwear and putting him in linen, thus favoring cutaneous excretion. These patients are of the same class who are benefited by diuretics.

After having tried the product of various mills, the most satisfactory linen underwear found has been that produced by Dr. Diemel of New York, and sold under the name of "Diemel Linen Mesh."

DISCUSSION.

Dr. Paquin.—I think the paper of vast importance, and Dr. Ambler's views coincide with mine. I have not had, however, the experience he has had with linen,

but I am quite sure from my experience that colds are very frequently produced by the fact of perspiration being produced on the skin. And as I have also had some experience in diseases of the lungs I am quite sure that those patients, particularly those who bundle in woolens, are the ones who suffer from attacks of so-called colds. I have noted frequently that those patients who have had chronic tuberculosis for any time come to the office with sometimes two or three undershirts of wool, sometimes even in the summer, and those are the patients for whom it is difficult to find any treatment, climatic or otherwise. I am also quite certain that the same condition of things exist in rheumatism. In institutional work I notice that those patients who do have rheumatism almost always keep themselves bundled up, and they are more sensitive to draughts than almost anybody else. I am not competent to speak of treatment by the use of linen, but it strikes me very rationally. It certainly is rational to explain the cause of colds when one sees the results obtained so frequently with those who keep themselves bundled up summer and winter. I myself have discarded woolen long ago, not for linen, because I did not know so much about that, but for cotton. I think Dr. Ambler's paper is an important one, and should be carefully studied.

Dr. E. R. Morris.—I want to say that although I have not studied the paper, still I appreciate it very much. I am prepared to accept that paper for the most part very favorably. I believe it is scientific and logical, and I believe in the course of a few years physicians, as such, as a rule, will adopt that more largely. Ten years ago more objection would probably have been made to the application of cold baths than we would have now from changing the woolen underwear on our patients. I believe the doctor is in as good form as could be, and certainly when it comes to stating the heat radiation and the functions of the skin we can see the point clearly. I see more than one point in the paper that I never thought of before, and I shall study the subject more than I have. The paper is certainly a good one and deserves a full discussion.

Dr. Minor.—I have had the misfortune of missing the majority of the paper, so can hardly discuss it justly. While there is much of the part I heard that I would agree with I would not be willing to give to the wearing of linen the universal application the author seems to think wise. Unquestionably those of us who have recommended woolen underclothing have often done so without a proper realization of the reasons for that advice, to too many the fact that it has been generally used has been their only reason for advising it, a most irrational procedure. That there are, however, excellent reasons in its favor is undeniable, nor need one suppose that it has been used all these years without any reason being sought for its justification.

To those wishing to know the reasons for its use I would refer to an admirably studied article by Prof. Rubner, of Berlin, in the first number for 1898 of Leydens Zeitschrift fur Diatetische find Physikalische Therapie. In this the scientific reasons are carefully gone over and he who wonders whether he has not been doing an injustice to his patients will find comfort, while at the same time no extreme "wool at any cost" attitude is taken. To quote his final words: "One can rationally clothe onesself with other articles also if one keeps in view the chief rules of a rational clothing; no overwarm clothes, good ventillation of them, homogenous evenly woven tissue, the layer next the skin not too thin, good isolation of the skin and as little difference as possible in conductivity in the tissue in its dry and moist conditions."

Dr. Ambler asks me why in a recent article I have recommended for consumptives woolen clothing (of proper weight and not too heavy) and I would say that not only the theoretical reasons given in the article referred to, but the results of clinical experience have justified that advice. At the same time there may well be cases in which linen may do admirably, and I can imagine that in summer, and possibly in winter as well, it will prove excellent, certainly the fact that it goes against our preconceptions is no argument, and I shall try it on myself first and then on my patients. Nevertheless, I am satisfied that the wearing of wool next the skin, if properly done, is an excellent thing, though my experience teaches me that 80 per cent. of consumptives wear a far too thick grade of wool, and I often have, as a first thing, to order a lighter weight.

I would here say that I believe that in many cases where Dr. Ambler believes that linen has helped him so much, and where he attributes the bad effects to the wearing of wool, I can, while the patient is still wearing wool, get the same effects, in stopping catarrhs and colds, and in lessening chilliness, by the careful use of cold water to the surface of the body; in this case, as in so many others over which doctors have discussed, mistakes are made in connecting cause and effect, Dr. Ambler would banish colds by giving up wool and regards linen as a necessity, I, while my patients still

wear it, get the same results by hydrotherapy, and am unwilling, therefore, to believe my old friend wool so great a curse as he would have me believe.

Personally, I have found that in the hottest summers I am fully as cool in very thin wool as in the best gauze and am also saved from the chilling which one feels if, while in a cotton undershirt, one perspires, thus satisfying me, that linen of which I have no experience is bad, but that, properly used, wool is good.

The doctor's paper has interested me so much, however, that I shall proceed to collect, at first on my own person, some experience on the subject, and if that final tribunal, clinical proof, is convincing I shall be glad to come over to his side.

Dr. Purefoy.—I enjoyed the reading of the paper very much. It is not a new question at all. It is one that the profession has been discussing for quite a number of years, and one that the laity has been discussing quite as long. There is a prominent man here in Asheville who says he had rheumatism as long as he wore flannel, and he says when he dropped flannel he dropped his rheumatism. He has continued to wear his cotton and he insists he has had no more rheumatism. I confess that I am not prepared to discuss the paper intelligently, but I would agree with Dr. Minor that I am open to conviction, and would be glad to look into this thing and give it a fair trial.

Dr. Sawyer.—I do not know that I can add anything. I noticed some little time ago that those patients wearing heavy flannels complained of cold more than those who did not wear them so heavy, and I even found that those who wore cotton did not have as much cold as those who wore flannel, but I have only recently been telling my patients to wear linen. I believe this porous linen to be better than the flannel. I think Dr. Minor is right in one respect, that is, about patients piling on entirely too much flannel or wool. I have seen them with several shirts on, and they shivered around even then; but if you can only induce them to take off those heavy woolen garments and put on a thin one of good quality of cotton or linen, the results will be better.

Dr. C. V. Reynolds.—Theoretically speaking, this is a very fine paper; practically speaking, I have had no experience with it. I received one of those little pamphlets and read and studied it. It is the only thing I have ever received on the subject, and it brings out some very fine points relative to evaporation and conduction of heat, and especially do I think it would be advisable for tubercular patients to be placed in linen, for in those patients we have so much perspiration. We all know that woolen clothing will take up a certain amount of moisture. I perspire very little. In my case, therefore, I think that wool would answer the purpose, in that it would keep me warm, because there is not much evaporation going on. But it is a very pretty subject, one that I said in the beginning I had had no experience with, but have made up my mind to give it a trial, and will first begin by putting it on myself. It is very expensive, a great deal more so than wool.

Dr. Tennent.—I do not know whether I can make any remarks from a professional point of view, but as a matter of common experience I might say something. It seems to me that it is out of reason for a thing of that kind to be universally applicable. The man who lives in a steam-heated house and who sits in his office all day, and gets on the car at night and rides home, lives in an entirely different climate, you might say, from the man who leads an out-door life. I do not think a man out doors all winter can get along without wearing woolen underwear. I am out of doors a great deal myself. I have tried cotton in the winter and never have been able to wear it. One winter I tried cotton until about the middle of January, and I had a cold for about three weeks, and I adopted heavy woolen underwear and did not have any more cold that winter. I am out of doors a great deal of the time, and am probably different from the usual run of tubercular patients.

Dr. McBrayer.—I was taken somewhat by surprise at the tenor of the paper. When we were young and had a call to a case we made the diagnosis before we got there. Sometimes we had to change it after we reached there. After I read the title to the paper I thought the doctor was going to pay his respects to the ladies. Sometimes, you know, they cut their dresses off at the top and sometimes at the bottom.

I enjoyed the doctor's paper very much indeed, but I am not prepared to discuss it fully. Some of the theories that he advanced are very well known and I suppose admitted by all. As for myself, I have not worn any woolen underclothes for a number of years, and I never suffer from the cold. I have been wearing cotton, and find it perfectly comfortable in the winter. I never feel the need of wool. I perspire quite freely upon every little exertion, and I think for that reason the cotton or linen would be much more pleasant for me. I doubt if it would be as pleasant for Dr.

Reynolds as wool. I enjoyed the paper very much, and think that it has done most of the Society a great deal of good, in that it will set us to thinking. I will give the subject more thought than I have done in the past, and I have no doubt that the majority of the other members of the Society will do the same thing.

Dr. C. S. Jordan.—Dr. Ambler's paper, as far as the linen question went, was rather new to me as to the ideas it brought forward, but it set me to thinking of the difference in the radiating properties of wool and cotton which was brought out this summer. As you know, nearly all of the soldiers were provided with heavy blue shirts. They were quite heavy, and were good wool, and after exercising any, walking or riding in Florida, you got thoroughly soaked and your shirts would be wet through and through, and after stopping in the shade for some time you would be chilled from your waist down, but from there up you would hardly feel it at all. We wore cotton from the waist down. Finally all of us that could wear wool next to the skin wore just the plain blue shirt without drawers, owing to that fact, because the radiation was sufficiently great to cool off and at the same time they chill to the body. I was certainly decidedly more comfortable to have one of those heavy shirts on. As for the doctor's paper, I am perfectly willing to believe in the value of linen to such an extent that I am going to try it myself.

Dr. Van Bergen.—I would like to ask a question. What is the objection to spun silk? It is not much more expensive. I had a case of asthma. I changed the patient to flannel. It was fifty times worse than it would be. The athletes in England came to the conclusion that if they wore flannel next to the skin it was all right. I knew a good many among the athletes, and when rowing or running they wear flannel. At other times they wear spun silk. They say if they are not in motion the evaporation is not quick enough and they wear silk. In this question of wool next to the skin in tubercular or asthmatic patients I would absolutely discard wool and go back to silk.

Dr. Minor.—Every doctor feels the temptation to fall into routine treatment and just so soon as he yields to this temptation he is doing an injustice to himself as well as to his patient. To apply linen or woolen indiscriminately to every case must at times be a mistake and I cannot believe whatever the advantages of linen that it is universally applicable as he claims. It is essential in all practice but especially so in phthisis to individualise, and I doubt not that there are cases and probably more than I am now prepared to admit which can be benefited by linen, but I cannot think that every case will fit one rule. What we wish to avoid is the too rapid chilling of the body by a rapid passing to the surface of the body heat. Certainly in my experience wool has protected the body from this better than the commoner cotton. If linen can be proven better than either by all means let us determine that fact and adapt ourselves to the new truth.

Dr. Reynolds.—Dr. Van Bergen brought up the question of silk. Dr. Jordan brought up the question of cotton and Dr. McBrayer brought up the question relative to too much perspiration and too little in the use of linen. Dr. Ambler claims that linen is warmer, as I understand, for me, whether I perspire or not, and it is cooler for Dr. McBrayer, whether he perspires or not, and I want him to explain that and the relative difference between silk, cotton and wool. It seems to me that if flannel is bad silk would be worse. Take a piece of woolen and try to wipe your hands on it, as Dr. Ambler says; you cannot do it. If you take a silk handkerchief you can dry your hands on it, but not nearly so quickly as on cotton.

Dr. Paquin.—Some thoughts occurred to me during the discussion which have mostly been covered since. One point impressed me very much in Dr. Minor's discussion, and that was about caution in using woolen underwear. There is no possibility, it seems to me, to be able to practice medicine properly by putting the patients on a routine basis. However, I understand the paper to be in a general way to utilize clothing as much as a preventive as a cure. With reference to treating certain cases, it is the very caution we must impress upon our patients and that caution is, not to perspire too much. It is the very point I wanted to bring out, that if we find that linen can be used with less caution, that patients do not always have to have explained what thickness they must wear, and how they must wear it, and what temperature they must have their houses; if linen can do away with that it would be very much advantage. I believe very much in hydrotherapy, but it would be equally as good with any other underwear, and if woolen is good and linen is better it would be better. I have tried the Jæger woolen underwear and have discarded that. I have used silk and have discarded that. I shall now try the linen.

Dr. C. P. Ambler.—I read this paper thinking perhaps some of the members are

not conversant with the usage of linen. It has only been two years since I have myself, and I will confess that when Dr. Babcock first told me the best thing I could do was to burn my woolen underwear I thought he was crazy. But having so much regard for his word I acted upon his advice, and where for the past ten years I had been repeatedly having catarrhal cold, and wearing the heaviest kind of wool next to my skin, and wearing heavy overcoats, since that time I have not had one single cold. Some of the points I might have touched on have been brought out in the discussion. I must certainly say to Dr. Purefoy that I make no claim to priority in this matter. I do not wish to be understood as claiming anything radically new. It is older than the hills. It is a fact that the patient who begins to bundle himself never gets through, and the one who bundles himself most is the one who feels the draught, and feeling a draught he imagines he has to pile on more; the more he piles on the more he macerates the skin, and the more perspiration is retained on his skin, the vaso-motors of the entire body are dilated, and he feels the least little draught.

As to cotton being better than linen, I do not believe it, for the simple reason that while cotton does absorb moisture it is not as free to give it up as linen. Linen is the best conductor of moisture we have and at the same time it is equally free to give it up. Take your underwear and saturate it with moisture you will find linen will dry in much less time than cotton or wool of the same weight. Linen is the best absorber and also the best evaporator. I am sorry Dr. Battle is not here. I had some elaborate experiments which I had conducted to answer some of his charges. Among other things he made the remark the other night that the reason my linen underwear was of value, and the only thing in favor of it was that it was so almighty thin that it left my wool clothing to come in contact with the skin, and therefore I get the benefit of the wool. That will not hold at all. To go into the theory of the thing, the reason we want to wear linen next to the body is this: Linen absorbs the moisture as it comes from the body and the wool will not. Put the wool directly in contact with the body and the moisture is retained on the body. Put the linen next to the skin and the linen rapidly takes the moisture up from the skin, and being a fabric which will give up the moisture it is passed off. The wool is the ideal garment for protection, I admit, but the place for the wool is on the outside. The wool is a non-conductor of moisture. Put it on the outside for the reason that, being a non-conductor of moisture it keeps the moist, damp air away from the body.

Dr. C. V. Reynolds.—Suppose you have the linen on the inside and the woolen on the outside. You say the wool prevents the damp air from striking the body. Doesn't it prevent the moist air on the inside from getting out.

Dr. Ambler.—The linen is a porous garment. The moisture is thus in a fabric which freely gives it up in the form of humid air, that is, air of high relative humidity, while if the wool is directly in contact with the body the latter is kept damp by the poor drying quality of the wool; moisture is evaporated from your linen underwear in the way of humid air, which passes through the wool, not by fabric conduction.

Now as to Dr. Jordan's point that the woolen shirt kept him warm. So it does. Wool next to the skin is all right, but if you cover it you lose what you would otherwise gain. Take a woolen under-shirt perfectly dry and sprinkle over it two ounces of water. Take the ordinary linen undershirt and sprinkle over it the same amount of water, spread them as far as you can, hang them in the air, and at the end of two hours the woolen shirt is practically dry, while the linen shirt is dry in forty-five minutes.

I do believe that wool answers the requirements as long as it keeps dry, but the moment the wool becomes damp it is exactly the opposite. Wool, as long as it is dry, is a good protector, but the moment it becomes damp it is an extremely poor protector on account of rapid heat conduction. Water, as you all know, is one of our best conductors of heat. It is not the fibre of the wool which conducts the moisture away. It is the air in the porous garment, which conducts it, and in that way the wool is a protection.

In regard to silk. I believe that still fails in the requirements of underwear in the same way that cotton does. The silk is not a conductor of moisture, and I believe that when the silk does become damp it is not free to give it up again in the same way. What we want in the way of underwear is underwear that will take the moisture up most quickly and give it up most rapidly.

There is another point. You all come across patients who complain that their feet always perspire and are cold. There is nothing that will answer as nicely as linen stockings. That is a very small point, but one easily tried. But I want to say it depends on the weaving of the linen. A linen woven hard and heavy, as you would weave a linen towel, will not answer the require-

ments. It has to be a porous linen. The best thing I have found is the Diemel Linen Mesh.

I think I can show you pretty conclusively, by means of experiments I have tried, that when you put wool over any substance to keep the heat either in or out of that substance the main thing resolves itself into this. You must keep that wool covering dry. For instance, we protect a piece of ice by putting a woolen covering over it, but if that woolen becomes wet the ice will melt more rapidly. You have got to keep the wool dry to answer your rrquirements.

In regard to Dr. Reynold's remarks about his wearing wool and Dr. McBrayer wearing linen. In the first place, if Dr. McBrayer will wear linen next to his skin the perspiration will be conducted away from his body and eliminated much more rapidly. If Dr. Reynolds wears it he is going to have a garment as warm as wool. What makes wool warm is the air-containing capacity. If the linen has an equal air-containing capacity, in other words, if it is equally as porous, then it will be equally as warm, and at the same time have the power of more rapidly conducting off and eliminating moisture. We are all perspiring patients. Insensible perspiration is constantly going on. I believe it is a settled fact that there is more weight in the way of excretion given off from the body through the skin than from the bowels or kidneys. To give you an instance about the linen. During our cold weather here I was out hunting one day, tramping over the hills. I came back to the house at night wet through with perspiration, and found that one of my patients wanted me in a hurry, and I changed my outer clothing, but had to leave my underwear on and it was perfectly damp. I drove altogether about six miles over the frozen ground, I took no overcoat, and when I got back to the house in about three hours, my underwear was as dry as it ever was, and I took no cold. Up to the time I wore linen I could not find a heavy enough overcoat to keep me warm, but since I have taken my wool off it is only in exceptional cases I wear an overcoat at all.

The Diagnosis of Appendictis.

By Frank T. Meriwether, M. D., U. S. A., Retired, Asheville, N. C.

The appendicitis is not so easily diagnosed as it is thought, is a fact patent to those who see much abnominal work. How often are we called of late for an operation when the patient has been treated for other diseases? And it is not always to the physician's discredit, for I recall a case operated upon by me some time ago that had been diagnosed by the great Pepper, excellent clinician that he was, as indigestion, during a previous attack, but in which the adhesions and conditions found showed must have been appendicitis.

The difficulties in diagnosis also explains why certain physicians having larger practices sees so few cases, while others cure large numbers by a strictly medical treatment. It is much like the obstretrician who delivers hundreds, or it may be thousands, without a perineal tear. He does not look for them, in the right way, or else is not skillful enough to discover them.

There are undoubtedly many cases of appendicitis in which the diagnosis is very clear, the patient himself making the diagnosis, but many cases demand the most profound thought and judgment. I know I see cases in which a diagnosis seems almost impossible to make with certainty, though thus far I have not operated unnecessarily. We often say with confidence that an acute, localized pain and tenderness in the right iliac fossa, accompanied with fever and a rapid pulse, after excluding ovarian disease, is very likely appendicular, but so often there is at first no localized pain, or if localized, it is not in the right fossa.

In my experience the most frequent seat of pain is at or about the umbilicus; and the temperature is very uncertain in one case with peritonitis, it being only 98 4.5 at its highest, with a pulse of from 74 to 80 and good in quality; and this was a case of perforation.

Appendicitis may be confounded with almost anything, and while the members of this particular society are undoubtedly fully able to differentiate in this disease,it may be well to refresh our minds a little. The various diseases of the female sexual organs, particularly those of the right ovary, are all very likely to be confounded with appendicitis.

I believe that in the majority of cases examination of the abdomen, combined with vaginal and bi-manual palpation will enable one to detect the offending organ, and establish a correct diagnosis. The examination of the right fossa is the most important means of diagnosis, or if from rigidity or tenderness, a thorough examination cannot be made, the character of the tenseness of the abdominal muscles.

In my experience, in ovarian or uterine troubles, if rigidity is marked, it is general,

†Read before the Southern Surgical and Gynecological Association.

that is, both recti muscles are involved, while in appendicitis it is the right lower quadrant only. Even during examination under an anesthesia this one-side rigidity often remains, and I have seen cases in which the right muscle did not become relaxed until some time after the operation. Also, the cases of exudate and pus from the pelvis rarely rise above the level of the anterior superior spine, while in appendicular trouble the tumor, if any, is apt to be above and rather internal, towards the umbilicus.

Ovarian Abscess.—Quite a number of times ovarian abscess have been met with in which the infection come from the appendix, the end of which is adherent, to the abscess wall. I have met with one case, in which an abnormally long and acutely flexed appendix was adherent to the ovary, in infection occurred, the result of which was an abscess the size of a walnut. Differentiated diagnosis in this case was practically impossible.

As a rule, however, the history of the case, the character of the pain, vaginal and bi-manual examination, the history of periodicity, and its relation to the menstrual flow, usually clears the diagnosis. The attacks are less explosive than in appendicitis, and the relation between pulse and the temperature are less disturbed.

In cases of ovaritis the character of the pain, tenderness not being so marked except upon very deep pressure, the tenderness and pain being lower in the pelvis, the history and vaginal examination should suffice. Of course attacks of appendicitis may be aggravated at the time of the menstrual crisis, as in a case of mine, the excess of blood in the pelvis causing a subacute attack of the appendicular trouble in a fibrous appendix.

In acute salpingitis there is often a marked resemblance to acute catarrhal appendicitis, but the history of possible infection, the different kind of pain, the lack of rigidity of the right rectus muscle, and the combined and vaginal examination should differentiate.

In acute salpinx the examination usually reveals the condition, but if the appendix is at fault and peritonitis has supervened, the rigidity of the vaginal vault from inflammatory deposit and muscular rigidity makes it impossible to map out anything.

Chronic pyo-salpinx should be easily differentiated by its history and an examination, a confusion arising only when the tumor is very large and if appendicular the appendix pointing southwardly, the abscess tending to burrow towards the rectum or vagina.

In extra uterine pregnancy the history of cessation of the menses, and other signs of pregnancy, the discharge per vagina, the character of the pain, the relation of the pulse and temperature and the combined and vaginal examination should reveal the nature of the trouble, though in a case of mine there were no signs of pregnancy and no vaginal discharge. In this case as in many we see, a positive diagnosis was impossible, but the necessity of operative measures being present in the event of either diagnosis the patient did not suffer for want of proper diagnosis.

A somewhat rare condition may be mistaken for a chronic appendicitis, but should be easily differentiated. This is a varicose condition of the broad ligament. In it, the dull aching pain, always present, no history of an acute attack, no localized pain or dullness over the region of the appendix, and the absence of inflammatory symptoms should be sufficient.

In a fibroid a mistake might arise, but history and age, with examination should make the diagnosis. Cases have been reported of a twisted pedicle of an ovarian cyst in which diagnosis seemed very difficult if not impossible, but the character of the pain is so different, the history, and examination, but the character of the rigidity of the muscle, if any, should clear it.

In infection following an early miscarriage, the infection travelling up the right tube, and causing local peritonitis, the difference in muscular rigidity, careful examination, no interference with the bowel function, no vomiting, and the pulse and temperature, should differentiate.

Occasionally peritonitis from a small leaking pus tube will give rise to symptoms simulating appendicitis.

In these cases, the muscular rigidity, if any, is more or less general, the bowel symptoms of appendicular diseases are not present, nausea and vomiting are not prominent, the history, and the pulse and temperature record are not those of appendicitis.

Cancer of the ileo-cecal region may be mistaken for appendicitis, or vice versa. The principal points of differentiation are, the age, history, cachexia, temperature record, and careful physical examination.

Pott's abscess should be easily differentiated, but mistakes have often occurred. In fact, I am cognizant of one. In it and nephritic and peri-nephritic abscess the lumbar examination will usually show the source of the tumor and pus, and with the history of the case and the pulse and temperature record, should differentiate.

In nephritic and hepatic colic the relation of the pulse and the temperature are not so distorted as is apt to be in appendicitis, and it is more likely to be the upper rather than

the lower portion of the right rectus which is rigid. The localization of the pain in the right fossa is almost certain to obtain within a few hours in appendicitis.

In nephritic colic, the tenderness over the kidney, the history, the very distinct paroxysmal character of the pain, no coating of the tongue, and no bowel symptoms, the pulse being only accelerated, as a rule, during the attack of pain, the examination of the urine, and the palpation of the abdomen, together with the absence of temperature changes should make up a diagnosis. In hepatic colic the history of the former gastric disturbance, the icterus, tumor and the location of the pain and the tenderness, the temperature and pulse record, should, in most cases, exclude appendicitis.

Typhoid of a fulminating character, may be confounded, but the usual prodromata, prolonged fever, possible infection, diarrhœa, excessively high temperature, should distinguish it. The cerebral symptoms of typhoid of this type are apt to be marked. I do not think that appendicitis should be confounded with typhoid with perforation, but I know of two cases of perforative appendicitis in which the diagnosis of typhoid perforation had been made.

The history of a necessary previous illness of two weeks, before pain and the symptoms of perforation, for typhoid perforation rarely occurs before the end of the commencement of the third week, should suffice. Even in a walking case the illness without pain would be noticed. I believe that it is frequent that a narrowing of the ilieum from typhoid ulceration may produce symptoms resembling appendicitis, but the history of the manner of the recurrence not accompanied by fever, with negative palpation and the history of typhoid fever preceding, and the pulse record should differentiate.

Ordinary colic, from indigestion or the ingestion of some article of diet often renders the diagnosis very obscure during the first few hours. The history of the indiscretion in diet, tendency to diarrhœa, constipation being the rule in appendicitis, no tenderness over the appendix, examination showing no enlarged appendix, no temperature, and the rate and quality and character of the pulse should lead one to make a proper diagnosis. The pain, however, is often of the same character, and it not infrequently is the case that the pulse and the temperature in appendicitis is normal. The following case is one of particular interest in this connection.

A negro boy, of sixteen, had what was supposed to be an attack of colic Monday evening, which was relieved by a small hypodermic of morphia. He was advised to take some salts, which he did, with the result that he felt about well the next morning. He had no fever and his pulse was 72. He did his work, which was that of a hostler, the next day, getting around fairly well. Upon Wednesday night he complained again and was given another hypodermic. Still no fever or pulse derangement. Thursday morning he had a little tympany, and quite a little pain, it being most marked about the umbilicus. Thursday noon the pain became localized at McBurney's point. I saw the case that afternoon, at which time the pulse was 72 and the temperature $98\frac{3}{5}$. Tympany was marked, the tongue slightly coated, some tenderness over the right iliac fossa, total loss of liver dullness, bowels had moved that morning, no nausea, and the patient was fairly comfortable.

An operation made showed a large perforation, with free fecal matter in the abdominal cavity, and about a pint of very foul pus free, no attempts on the part of nature having been made to wall it off. This patient had at no time shown signs of shock, and went off the table with a pulse of 80, and a temperature of 99.

In differentiating between chronic appendicular disease and tubercular peritonitis the points are the temperature record, the history, and the lesion to be found elsewhere in tuberculosis. No mass is found in tubercular peritonitis, as would be found in chronic appendicular abscess, but the other symptoms may be very confusing. In a case I had some time ago the history was that of recurrent appendicitis, with a temperature pointing towards pus somewhere, but at the time of operation a localized tubercular peritonitis was found, with several enlarged glands containing the tubercle bacilli. There was a sense of resistance in the right fossa, though no distinct tumor was felt.

In intestinal obstruction the temperature is more apt to be subnormal, there is no history of a previous attack, and the obstruction of the bowel is usually absolute. In one case seen the diagnosis of appendicitis was made upon the fact that after persistent endeavor the bowels were moved, though the former physicians had considered the obstruction absolute, and the operation proved the correctness of the diagnosis.

There is not apt to be a local rigidity of the rectus, and the character of the pain and the vomiting and of the tumor, and the temperature record should show in most cases the trouble to be strangulation.

The Preventive and Curative Treatment of Eclampsia.*

By S. M. Davega, M. D., Chester, S. C.

Gentlemen and members of the South Carolina Medical Association: You have my apology for presenting to you a subject which has been so long and so ably discussed, not only by the different associations in the country and abroad, but by the leading journals of the land. However, I consider it a subject of vital interest to each and every one of us, and one which cannot receive too much attention.

While discussions have been full and free, I am sorry to say that the exact nature and source of eclampsia is no nearer fixed than it was twenty or thirty years ago. Many theories have been advanced and just as many have been discarded. It is not my purpose to offer you a resume of the many theories advanced. It is simply my aim to offer the data which justify a line of treatment, which is in accord with the hypothesis which now rallies the greater number of supporters, and one which I believe time will prove correct.

I am thoroughly convinced that eclampsia is neither epileptic, apoplectic, nor hysterical in character, but is due to a toxæmia confined to the pregnant or puerperal state. Urea which has been for a long time the scare-crow of physicians, was asserted to be the toxic substance, and the convulsions were naturally and very properly called uræmic. This theory was soon thrown aside, as observation proved urea to be a diuretic, and that the intra-venus injections of it failed to produce any morbid phenomena. This substance urea, which was for a long time considered a poison, can be used as a medicament, and is capable more than any other of encouraging the secretion of urine. So we cannot attribute eclampsia to ureas, for it certainly combats it by forcing the renal barrier. Neither can I accept the theory that eclampsia is due to albuminuria, for repeated examinations of the urine have failed to reveal the slghest trace of albumen. One author reports several cases where eclampsia began several days before labor, and continued several days after delivery without the urine being albuminous. On the contrary, we all have had many cases with albuminous urine which failed to develop eclampsia. While I do not believe eclampsia is due to albuminuria, I would not have you understand that I attach no importance to its presence, for most assuredly it, taken together with other existing conditions, warns us that there is a faulty relationship between nutrition and excretion, and that something must be done to correct this. It is very certain, therefore, not only that renal disease is very far from being a constant forerunner of eclampsia, on the one hand, but that its absence, on the other hand, is no certain proof that such convulsions will not occur. Neither does the amount of albumen bear any relationship to the gravity of the case. I believe that eclampsia is due to the over-production and retention of toxic products that the kidneys and other emunctories cannot eliminate. I further believe that these toxins are principally developed in the intestinal tract as the result of exaggerated intestinal fermentation or putrefaction. Without doubt the stools eliminate the greatest part of these toxins which are expelled with them, but owing to the slow movement of the intestinal contents a large quantity of these toxins are re-absorbed by the intestinal mucous surface, are carried to the liver which fails to arrest or transform them, and finally goes to that faithful servant, the kidney, in excess of its activity. This over-production and under-elimination results in a toxæmia of intestinal origin which irritates the brain and nerve centers to such a degree that an explosion in the form of convulsions occurs. It is a well-known fact to all of us that the organism in its healthy state is a receptacle and laboratory of poisons, and at every moment there is a risk of being overpowered by poisons generated in the system. There are continual attempts at self-destruction, and this self-poisoning, or intoxication is only prevented by the activity of the excretory organs, chiefly the kidney, and by the watchfulness of the liver, which acts the part of a sentinel to the material brought to it by the portal vein, from the alimentary canal. We thus see that in order that intoxication be avoided, it is necessary that the emunctory offices should be in a state of anatomical and functional activity that the blood, the circulatory apparatus ,and the nervous system should functionate normally. If the chances of self-poisoning or destruction, are so great in the healthy human, I would ask how much greater are they in the pregnant woman with her nervous forces exaggerated, her resisting power diminished, and her physical energy lessened, whereby all the emunctory organs are severely hampered in the performance of their duties.

Admitting the toxæmic origin of eclampsia, also that the toxins are developed principally in the intestinal canal, and that this

*Read before the South Carolina Medical Association.

toxæmia belongs alone to the pregnant or puerperal state, I shall at once proceed to consider what I think the most rational, and in my hands, the most successful treatment. The preventive treatment of eclampsia must of course be addressed to the pre-eclamptic state, and it is very important that we early recognize this toxæmic condition. Whenever a pregnant woman comes to us complaining of some slight departure from ordinary health, such as malaise with slight headache and indigestion, we should at once become suspicious of the advent of general toxæmia, and we should promptly make a thorough investigation and give thorough treatment. If, after making a thorough examination of the urine, you fail to find albumen, don't be deceived, and at the same time deceive your patient by saying to her, "you are alright, you are simply going through just what all women in your condition have to do." The absence of albumen proves absolutely nothing, and very frequently it makes its first appearance after an eclamptic seizure of great severity. I repeat that these slight departures from ordinary health in the pregnant woman, such as malaise, indigestion and scintillation of light, mark the beginning of toxæmia, and I urge that each and every one of us give them due consideration, for otherwise the halcyon moment will be lost and we will look back with regret when we are probably called to face this woman in an eclamptic seizure. On the other hand, if, after examination of a pregnant woman, complaining of headache, constipation, disordered vision, irritability, œdema, dyspnoea and nervous disturbances, you should find albumen and diminished urinary secretion, don't decide at once that she is a victim of kidney disease, and begin to abuse and punish these faithful and already over-worked organs, by pouring in digitalis and potass salts. The potassium salts should be avoided, first, because they favor the production of intestinal toxins, thus contributing a large share in producing intoxication; second, because tbey always tend to produce anæmia, a condition which we desire to correct, and not to foster; third, because they are particularly poisonous and when retained in the blood, are themselves capable of producing convulsions. The consensus of opinion is, that meat should be absolutely forbidden this class of patients, and why so? Simply because it is full of potass salts. If it is wrong to give meat because of the potass, it is doubly wrong to give potass as a medicine. Digitalis should only be given when, beyond a doubt, we have a chronic kidney disease associated with cardiac disorders. If the kidney no longer has the power to eliminate the toxic substances formed in the organism, I hold that there is then retained the therapeutic poisons, and that the employment of toxic medicines in such cases has the effect of bringing about an association of medical intoxication with the already existing toxæmia. In the disease under consideration I would advise that the kidneys be left severely alone, except that we have the subjects drink water in large quantities, by which means we dilute the toxins and thus restore the functional activity of these organs. In order that my therapeutic views be thoroughly intelligible, I will here repeat that we have to deal with a toxæmia confined to the pregnant or puerperal state, and that this toxæmic condition is due to alimentation, intestinal fermentation and putrefaction, together with the sluggish or suspended action of the liver. By carefully watching the pregnant woman and early recognizing the symptoms and signs of intoxication, we may, with reason, expect that hygienic and medicinal measures will correct the errors that rapidly tend toward eclampsia. The woman should have, daily, a warm bath at bedtime, and in order to maintain the warmth of the body and at the same time encourage a healthy action of the skin, flannel should be worn next to the skin. She should also be urged to take active outdoor exercise as it has been demonstrated that a day of muscular activity spent in the open air diminishes the toxicity of the urine one-third, and on that day the toxicity does not diminish only during the time devoted to muscular exercise. Our chief aim must be to diminish the source of the toxins and at the same time hasten their elimination. The means at our command to limit the supply of toxins is the selection of food which is quickly digested and absorbed, and which will also have the advantage of not giving over to the agents of intestinal putrefaction undigested and easily putrescible material. In milk we have an ideal food which produces the very desirable result; that is to say fæcal matter scanty and solid, besides it increases the fluids of the body, thus diluting the circulating toxins and promoting renal activity. Elimination of these toxins from the organism is effected by the persistent use of saline purgatives together with the administering of large quantities of water. Saline purgatives hasten intestinal movements, sweep out the intestinal canal removing toxic substances which otherwise would be absorbed, and they also aid the liver and kidneys. They also dehydrate the blood,

consequently the tissues. This dehydration causes a diminution of œdemas; this will remove water from the cells, and along with this water a large portion of the toxic substances. But remember there will only result from this a favorable effect if we immediately restore to the tissue the water removed. Otherwise we will only have displaced the poison by making it pass from the cells into the plasma. So after dehydration, in order that we may obtain favorable and lasting results, we must proceed at once to bring about hydration, by forcing our patient to drink water in sufficient quantity, either plain or charged. Beyond a doubt, water is the only safe and sure diuretic to use in these cases. By diluting the toxins it arouses the kidneys to functional activity, thus giving a speedy exit to the toxins from the body. My rule is to begin purgation in the same way that I do, preparatory for abdominal sections. That is, I give two teaspoonsful of epsom salts in hot water; this is followed in ½ hour with four grains calomel, and this is followed with two teaspoonsful salts every hour until two doses are given. After the bowels have been freely moved. smaller doses are given daily to produce three or four watery movements. Without any hesitation I tell you that this treament can with safety and marked benefit be continued for days and weeks until the premonitory symtoms abate or disappear, when the purgation may be discontinued. Instead of producing anæmia, as some claim, you will see the blood daily improve as the means adopted are removing from the body toxic material which produces anæmia. I have never practiced bleeding, as all the cases that have come under my observation have been decidedly anæmic. Where I have high arterial tension, I give nitro-glycerine 1.50 grain doses, every hour until effect is produced. If, after carrying out the above simple but very effective methods, we should find all the premonitory symptoms and signs of eclampsia intensified, we then have an earnest appeal on the part of nature for obstetrical aid. She says, in unmistakable language, that I have carried an offending fœtus just as long as my economy will tolerate it without disastrous results, and I beg to be relieved of the offending member before I am severely handicapped by an eclamptic seizure. The induction of premature labor before the beginning of an eclamptic seizure is a phase of this subject that I think should have our careful consideration.

My idea of premature delivery before the eclamptic seizure, is that it should be done in all cases where, in spite of careful dietetic, hygienic, and medicinal precautions, we have a daily diminution of urine and urinary solids, combined with certain premonitory symptoms, indicating the close proximity of convulsions.

Possessing the facts that eclampsia during pregnancy is far more fatal than either the intra-partum or post-partum form, and also that the fœtus absorbs the toxins transferred to it from the maternal blood, I fail to appreciatethe wisdom of delaying to empty the uterus. In fact it reminds me too much of the sleepy flagman who fractured his leg hastening to place a torpedo signal on the railroad track after the trains had collided.

During the past two years I have been several times consulted as to the advisability of emptying the uterus for patients who had previously suffered from an attack of eclampsia. Until recently this was a very perplexing question, as I believed it to be both legally and professionally wrong to empty the uterus under such conditions unless I was sure there existed an undoubted kidney trouble. However, a very sad experience during the past two years has led me to conclude that once a woman has experienced the horrible ordeal of an eclamptic seizure, and where almost demented with fear she dreads encountering the danger of eclampsia the second time, her feelings deserve consideration, and that emptying the uterus is a justifiable procedure. I shall now dismiss the pre-eclamptic state and take up eclampsia itself.

Suppose that we are hastily called to the bedside of a woman where convulsions have commenced, what is to be done? The reply brings us face to face with the most interesting and important question in the management of eclampsia, concerning which there is quite a diversity of opinion. Observation and personal experience warrant my advocating speedy delivery, under profound anæsthesia as I feel that by so doing I am assisting nature to accomplish her own desire. The simple assertion that convulsions don't always stop after delivery, must by no means be considered a valid argument against speedy delivery. Neither does post-partum hemorrhage always check after emptying the uterus, still I am sure we all agree that the removal of the placenta and membranes is the first and very important thing to be done. So it is with eclampsia, after the uterus has been emptied, we can with less danger and greater expectations push the various medicinal means at our command. Remembering that in the majority of cases eclampsia leads to expulsion of the fœtus and that with each succeeding convulsion the life of the child is directly im-

perilled, also that the mother is growing weaker and weaker at the same time risking an aggravation of symptoms; disturbances of vision more or less permanent, puerperal mania or paralysis, I consider delay a very hazardous procedure, while in speedy delivery is to be found a rational application of a scientific procedure to a very alarming condition. Having reached the bedside of eclamptic patient, the first indication is to control the convulsions, which I endeavor to do by chloroform inhalation together with rectal administration of chloral in one-dram doses. The second and all-important indication is to at once begin preparations for speedy delivery. The bowels should be emptied as thoroughly as possible by high enema. The importance of thoroughly catheterizing the bladder, I will demonstrate by citing an experience that I had in North Carolina last December. While waiting for a train I was called to a woman having one convulsion after another. The attending physician informed me that she was about six months pregnant; at the same time stated that he had used the catheter twice, each time failing to get a drop of urine. A glance at the abdomen told me that its contour was not that of six months pregnancy. On examination I found a fluctuating tumor extending from the simphysis to the umbilicus. In addition to this I outlined a pregnant uterus. I introduced a soft rubber male catheter and drew off three quarts of urine after which the convulsions ceased, and the woman went on to term. This profuse evacuation of urine proved the convulsions to be reflexes due to an enormously distended bladder. Having emptied the bowels and bladder our attention should next be directed to cleansing the external genitals and vagina. This is accomplished while the patient is under chloroform, by first scrubbing with soap and water, next with Bichloride solution and finally with pure alcohol. While cleansing the parts and while patient is under chloroform, I give subcutaneously one pint warm saline solution. This rapidly enters the circulation, dilutes the toxins, diminishes their power, thus acting as a sedative to the nervous system, at the same time relieving arterial tension without in any way depressing the vital forces. This solution can be repeated with marked benefit at the end of delivery. With surgically clean hands I next proceed to dilate the uterus with my fingers and when sufficient dilation has been effected I complete delivery either by version or forceps.

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Physiological Action—Digestive System.—Five to ten drops of either of these solutions largely diluted with water stimulate the flow of gastric and intestinal juices and augment peristalsis, improving the digestive and nutritive functions. In anatomy of the gastric tubules in children and adults Mercauro and Arsenauro are invaluable.

Circulatory System.—Cardiac action may be slightly stimulated by the doses mentioned—so far from being deleterious, it actually tends to invigorate the system—increasing the number of red blood corpuscles and prevents their destruction in such diseases as Chlorosis and Anæmia.

Nervous System.—The general effect of Arsenauro and Mercauro on the brain and nervous system is that of a tonic—a property which is supposed to explain their antiperiodic nature, in which respect quinine alone is their superior.

In very large doses, 60 to 80 drops, the cerebral functions were stimulated, even to the point of exhiliration. Experiments have shown that the sensory nervous apparatus is strongly affected. This action finally involves the motor system.

Medicinal amounts, 10 to 30 drops, act as a nervous excitant, stimulating the trophic apparatus—(Lydston).

Under prolonged use these solutions tend to accumulate to a greater extent in nervous than in other tissues.

Respiratory System.—Ten to fifteen drop doses affect special change in respiration other than increased power and stimulus of the respiratory center. It has been held, with authority, that small doses (5 drops) stimulate endings of the pulmonary vagi.

Absorption and Elimination.—Arsenauro and Mercauro are readily absorbed by the blood.

Their presence may be detected in the viscera, bile, urine, sweat, the bronchial and intestinal mucous membrane and even in the parenchymatous tissues. It is eliminated

very slowly from the system by the intestines and rapidly by the urine; possibly also, by the bile and the skin; the saliva, milk and even the tears are said to share in the process of elimination.

Ten to thirty drop doses prevent tissue change. Their therapeutic action is certainly to modify and improve nutrition.

Temperature.—The temperature is unaffected by medicinal doses of Arsenauro or Mercauro.

Eye.—Large doses of these solutions, 60 to 80 drops, in diseases of the eye are followed by œdema of the lids, but no injection of the conjunctiva.

"The puffiness of the lids produced sometimes by large doses aggravates no diseases of the eye, for no congestion of the conjunctiva is produced."—(Short.)

Untoward Action.—Differing from the characteristic symptoms of poisoning produced by medicinal doses of other solutions of Arsenic, in susceptible persons, these solutions have been reported without aggravated toxic effect.

Frontal Headache.—A tendency to vertigo, frequent alvine evacuations have been reported in rare instances, but these idiosyncrasies are easily controlled by lessening the dose or increase the dilution with a larger quantity of water at the time of administration or giving it before, instead of after meals or vice versa.

Poisoning.—Several cases have been reported where the contents of original bottles of one ounce have been swallowed with suicidal intent, but except the symptoms mentioned above, under untoward effects, the cases promptly recovered. The claim is made for these solutions, that they have all the benefits of Arsenic, but their combination with Gold and Bromide prevents toxic effects.

Dose.—There are two methods of getting a patient thoroughly under the influence of Arsenauro or Mercauro.

1. Begin with a small dose, 5 drops, and increase (minim 0.006 c.c.) a day until untoward symptoms appear, namely, swelling of the lids, a tendency to vertigo or frontal headache, or the dose has reached 30 drops; then decrease the amount one minim, or drop, each dose until untoward effects disappear, and continue this dose so reached for at least eight weeks.

2. Hypodermatically.—In the malignant diseases, carcinoma and the various cachexiæ, it may be desirable to obtain a very quick saturation of the system, and this mode of administration has been most highly extolled in such cases.

The liver has a strong elective affinity for them. The hypodermic use of them distributes them through the system just as mercury is distributed by inunction, carrying it immediately to all parts of the system by the circulation.

For hypodermic use, the following rule is appropriate:

Dilute with equal quantity of distilled water. Use alcohol friction over the part where the needle is to be introduced (preferably the muscles of the back). Let the injection be given deep into the muscles and be followed by active friction with alcohol after injection.

Note.—Dilute at one time only sufficient quantity for each injection.

Incompatibles.—With all organic matter.

It is best to direct the patient to drop the dose to be taken into a half tumbler of water at meal time, either before or after meals. Careful study of the effects of the drug in each case will make it possible to guard its administration so that tolerance can be established. A result much to be desired in order to secure the maxim benefit.

Considering the enormous doses to which the arsenocophagi becomes habituated, failure in the medical administration of the solutions argues the want of ability to employ them scientifically. Their superiority over all other preparations of Arsenic is paramount.

Internally.—Arsenauro is a peculiarly efficient remedy in Chronic Scaly Skin diseases. Like all other specifics, it influences diseases of a chronic nature more favorably than acute disorders. This preparation, therefore, is a most valued remedy in psoriasis, lepra, and squamous eczema. If syphilis co-exists preference should be given to Mercauro. Pemphigus, Prurigo, Acne and Lichen Ruber have also been favorably influenced by the continued administration of these solutions. In the successful management of these chronic skin diseases, it is necessary that the preparation employed be given in as large doses as can be tolerated by the patient, and the treatment continued unremittingly for a long period. It is well to employ these solutions alternately in these cases—say 6 weeks of Arsenauro—rest a week from any treatment, then 6 weeks of Mercauro—rest a week, then Arsenauro, and so on.

Lymphoma, whether superficial or occupying the great cavities is benefitted greatly by similar treatment.

Asthma and Bronchitis, whether acute or chronic, accompanying or succeeding scaly skin diseases, are singularly amenable to these solutions when the dose is carried to the full physiological limit. Another condition, Dysmonorrhœa, frequently noticed in women with a tendency to Asthma, or

subject to chronic diseases of the skin, is often cured by Arsenauro. The obstinate and often incurable disease knows as pernicious Anæmia yield better to Arsenauro than to any other known remedy. The effect of the compound in this disease is not simply due to its increasing the number and quality of the red blood corpuscles, but also to its preventing or delaying their destruction in the portal circulation.

It should be given continuously and in gradually increasing doses until the symptoms due to intolerance are present, when the increase should cease and the same dose be maintained for some time. By carefully watching the indications and by the timely use of laxatives the dosage may be easily adjusted, so that the full benefit may be derived from this valuable product.

The statements in the preceding paragraph are applicable also to Leukemia, whether splenic, myelogenic or lymphatic, and to Hodgkin's disease, of course bearing in mind Mercauro preferably, if Syphilis co-exist.

Arsenauro and Mercauro rank next to quinine in the treatment of Malaria. Chronic cases, in which quinine has lost its power are benefitted in a marked manner by these compounds. It is a peculiar fact that relapses are fewer after treatment by Arsenaurio than after the use of Warburg's Tincture of Quinine. It can be employed in cases of Malaria at all times without regard to the presence or absence of fever or chills.

It has remarkable efficacy in the treatment of Neuralgia of the intercostal and fifth pair of nerves. Arsenauro is equally valuable in these cases whether the diseases be due to Malaria or General Debility.

The author wishes to urgently recommend the use of Arsenauro in Pulmonary Phthisis. In certain forms of this disease he regards it superior to any other remedy. Particularly useful in those conditions which are characterized by excessive expectoration and a slow degenerative process.

The good results of this treatment in these cases is shown in a conspicuous manner by a marked improvement in the general condition of the patient, there being a lessened pulmonary secretion, a reduction in temperature, inprovement of the appetite and consequent increase in the body weight.

In chorea, arsenauro very justly merits the name of specific, very rarely failing to effect a cure when judiciously administered. It should be given in full doses, and increased as tolerance is established.

This medicine seems to act equally well in gastralgia; many irritative conditions of the stomach are relieved by minute doses—2 to 5 drops. It is particularly valuable in gastric ulcer and cancer.

It has proved of great service in hay fever, spasmodic asthma and acute coryza.

It is particularly serviceable in catarrhal pneumonia and in chronic bronchitis. It is highly recommended in diabetes mellitus.

Rheumatoid arthritis is more favorably influenced by the use of this medicament than by any other treatment. Its combination with bromide of mercury—mercauro—has produced better results in secondary and tertiary syphilis than mercury alone in any form—and especially has this been noted in the stigmata of nervous syphilis. Somnolence is a threatening prodrome of the cerebral complications of syphilis. It varies in intensity from mere drosiness to profound lethargy. In the milder cases the patient may attend to business, but his executive ability is greatly impaired. His memory is poor. He is unable to concentrate attention upon the matter in hand, and often falls asleep at work, though the previous night may have been passed in deep and continual sleep.

Circulatory disturbance, the result of arterial disease is evidently the casual factor in these cases. Accordingly, many such cases, if not properly treated, eventuate in thrombosis, softening and hemiplegia. The gold in the compounds seems to exert a powerful influence in restoring the circulation to a normal basis, and the arsenic and mercury act as tonics and eliminatives.

Certain nervous diseases of the aged, such as melancholia and hypochondria, are often relieved by small doses of arsenauro.

Administration.—Arsenauro and mercauro should be given ordinarily after meals. There are certain conditions, however, requiring its administration in small doses before meals. Children are much less susceptible to them than adults, often being able to take adult doses with impunity.

During a course of treatment with these solutions the patient should be instructed to watch carefully for the first outward manifestations, such as puffiness about the eyes, nausea, diarrhœa, numbness of the fingers, or frontal headache, dizziness or vertigo. Any one of these symptoms is an indication that the dose should not be increased and it may be necessary to lessen the dose, or even to discontinue the remedy altogether for a while—temporarily.

Here we have old and well-tried remedies, made infinitely more valuable through advances in chemistry and for which I give credit to an enterprising American firm.

170 West 130th Street.

Picric Acid in Eczema.

F. Radaeli (British Medical Journal, March, 1899). The affected part was first freed from scabs, etc., the hair cut as short as possible, and the whole region thoroughly washed with boracic acid solution. When the part had been dried, applications of a saturated watery solution of picric acid were made with pledgets of cotton; then a compress wrung out of the same solution was applied, and over this was placed a layer of cotton-wool, the thickness of which was proportionate to the abundance of the secretion. The whole was kept in place by a bandage. The dressing was left on for one or two days, The author points out the special convenience of the picric acid dressing in acute eczemas where there is much "weeping," as it does not require frequent changing. On the other hand, the remedy has the disadvantage that it causes great smarting in the parts to which it is applied. This, however, ceases completely in ten or fifteen minutes, giving place to a sense of relief which is mainly due to the cessation of itching. Details are given of a number of cases (acute eczema of scalp, chronic eczema, diffuse acute eczema, eczema impetiginoides of the face, "varicelloid" eczema, etc.), in all of which the results of the picric acid treatment were satisfactory.

The Circulation of the Blood while Sick.

Dr. T. L, Putman (Medical Association of the Mississippi Valley, March, 1899.) said:

The sole object in selecting this subject for a short paper, was merely to condense a few very important facts as observed by a busy practitioner in his daily rounds. During the winter of 1898 and '99, the lagrippe was very prevalent throughout the State of Iowa, and especially was it difficult to manage with elderly people. The writer invariably observed that the "old folks" were sitting about the house every day from the first of November until the first of March. Through the inclemency of the weather they were necessarily confined to the house, sitting around with their heads full of blood, the blood vessels on the surface of the body empty, and the internal organs burdened with excess of blood. The one principal treatment that was most useful consisted in establishing an equalization of the circulation of the blood, so, in order to accomplish this, the writer found it necessary to put his patients to rest in a recumbent position.

The next principle set forth was the fact that the skin and its blood vessels are capable of containing *one-half* of the blood of the human body, and in order to relieve the congested condition of the internal organs, and the brain, it was necessary to utilize some safe means to invite the blood to the surface of the body.

Histologically, the points touched upon were, viz.: The general distribution of microbic infection throughout the body, independent of the blood currents, the rapid and mysterious circulation of the leucocyte carrying with it coloring matter and bacteria. The responsibility of the leucocyte in carrying infection in this way, makes it easy to understand the phenomenon of metastatic inflammation—that the red corpuscle being less active in its migrations is not so responsible for the distribution of microbic infection. Another point mentioned was the rapidity with which the capillaries of any given part will enlarge, that is, double their ordinary calibre within from two to four hours. Hence the rapid swelling of any part, as the tonsil, etc.

Treatment of Fibroids of the Uterus.

Martin (Amer. Jour. of Surg. and Gyne.) summarizes an article on the treatment of uterine fibroids as follows:

The only sure cure for fibroid tumors of the uterus to-day is the total removal of the uterus.

The total removal of the uterus, while curing the tumor, leaves frequently a string of unpleasant sequelæ, causes death from the operation in at least 5 per cent. of the cases in the hands of experts, and deprives the woman of the possibility of bearing children.

Conservative methods of treatment which should be pushed to the legitimate possibilities are: Medicinal and electrical measures, and vaginal ligation of the broad ligament.

Fibroids would rarely destroy life if never submitted to a radical operation if submitted to the conservative treatment.

Electricity should be employed as a remedy for fibroids in all women over 40 or 45 years of age in which the tumor is interstitial. It should be employed in all inoperative cases of whatever age.

Vaginal ligation of the broad ligament may be employed as a conservative remedy in all bleeding fibroids of whatever age, especially in the few years preceding the menopause. It should be employed in all cases of desperate hemorrhage when life is threatened, because of the loss of blood.

Removal of appendages should only be resorted to after the abdomen has been opened for a hysterectomy, and the latter is found inadvisable.

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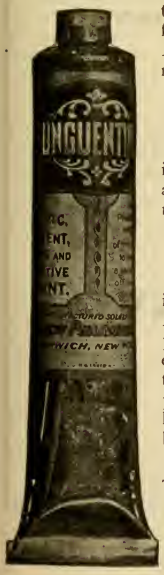

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THE MORPHINE HABIT.

Pain, in its primary manifestation, is a blessing. It is a conservative instinct. It is a danger signal. It is a fire-alarm messenger, telling of existing conflagration in some ward or precinct of the human corporation, and it wisely keeps on ringing up the "central" until the engine and hose have subdued the flames. It is a messenger to the train dispatcher of "slips," "washouts," "obstruction on the track" or wreckage somewhere." But due notice having once been given, it sometimes becomes necessary to quiet the persistent clamor of the messenger in order that headquarters be not distracted in its efforts to direct and enforce relief measures. To this end morphine is frequently prescribed. Used with discretion, it is a blessing. Used without discretion, it becomes a curse. It is an angel. It is also a demon. It says to the purturbed nervous system, "Go slow," till we get over this piece of "bad track," or till this obstruction is removed"; but it must not be forgotten the section men must mend the track—going slow will not do it. If the track is all bad, and the "corporate system" bankrupt of material for repair, then it is proper to go slow all the way. What I mean by these analogies is this, that in acute painful affections, not liable to become chronic, use it. Here it is a blessing, and may be safely administered, but it should be given very discretely—something on the "kiss and never tell" line, for if the patient knows what it was that kissed away the pain, he or she may come to like it, and then "the devil is to pay."

In chronic painful affections that are curable, avoid its use as you would a serpent; but where the affection is incurable, and the pain intense, then in mercy, combined with discretion, use it. The indiscret practice of telling a patient the name of a drug that brings to them such deadning of the sensibility to pain, such as morphine, cocaine or chloral, is I believe, largely responsible for the rapidly increasing number of victims to the "habit." It never cures. It comes as an angel, *in its use*. It becomes transformed into a demon, *in its abuse*. De-Quincy and Coleridge are examples of its power to wreck the most brilliant of men, but the world heeds not such warning. Not so much to the world, which is not always observent, but fearfully so to the victim himself, is the despairing consciousness of utter wretchedness induced by the habit made manifest. It brings a temporary calmness to the physical; it increases, for a brief period, the brilliancy of the mental, then a torpor of the whole system ensues, and the awakening from the somnolence is only to greater misery. It never brings refreshing sleep. It is not sleep at all; it is only a coma-vigil, followed by stupor, and the system is daily more and more exhausted by its previous excitement. The eye is dull and perhaps tinged with bile, because the functions of the liver has been interferred with. The blood is darker than before, and the mind is also darker. There is a restlessness, an ill-defined sense that things are all out of sorts, and that something must be done to restore the system to its proper balance. It is presumed now that only a few, perhaps necessary doses have been taken, but the danger line has already been reached. This temporary dullness, which by the proper exercise of will power, may be shaken off in a few hours, is to become permanent if the use of the drug is resumed, just as sure as the stupidity of the confirmed drunkard follows the prolonged use of the wine of the first debauch.

How can this tendency to the formation of the habit be broken up? I can speak from a limited experience, in a few cases.

First. Warn the patient of the imminent danger and fearful results, so as to *enlist his will power*.

Second. Throw on the tongue as much salt as would lay on a nickle, and wash it down with a tumbler of cold water every morning half an hour before breakfast. This cleanses the stomach, brightens up the blood, and acts as a laxative.

Third. *A vegetable diet*. Banish pork in any form. Avoid yeast bread. Eat freely of ripe fruits, especially apples. Drink nothing during the meal, and but sparingly of tea or coffee at its conclusion, then within an hour, take an additional pinch of salt to complete digestion. Let this apply to every meal. If already partially enslaved, and cannot completely discard the drug at once, cut down the

dose one-tenth, each time it is taken, and the morbid craving for it will soon be gone, if this course is rigidly followed. As a tonic to assist in bracing the system against its depressing effects, I know of nothing better than small doses of strychnine.

IS GENIUS A FORM OF INSANITY?

It is an exceedingly difficult matter to draw the line which separate the sane from the insane.

When we study the diagnostic traits of mental disease we begin to doubt whether some of our associates, whose mental processes we have hitherto held in the highest respect, are not, to put it mildly, in a questionable condition.

If this is true of the average man, how much more of the genius, martyrs, heroes and devotees, whose acts make history. For example:

Martin Luther had hallucinations; Peter the Great and Napoleon I. were both epileptics; as was Julius Cæsar; Raphael was afflicted with suicidal mania; Richelieu on occasions imagined himself a horse; Descartes was followed by a spectre; Cromwell was a hypochondriac and had visions; J. J. Rosseau was a melancholy madman; Swedenborg imagined that he went to heaven on a white horse; Mohammed was an epileptic; Dean Swift was partially insane by inheritance; Shelly had hallucinations; Charles Lamb and his sister were both victims of insanity; Coleridge was a morbid maniac; Milton was of a morbid temperament. Modern ideas of hell being formed by his descriptions of a diseased imagination.

But probably the most marked example of insanity combined with a sagacity, perseverance and bravery, unequalled in history, is that of Joan of Arc. The picture of an ignorant peasant girl, going about with a standard in her hand, and announcing to the world that she would rescue France from her enemies, because the Virgin Mary appeared to her every day and commanded her to do so. There is not an alienist living to-day who would have hesitated a moment as to the question of her sanity.

Many a person whose mental poise is illy balanced becomes eminent through a combination of circumstances and a time favorable for radical measures joined to an ignorance of the forces they combat against.

The mere audacity of the act stamps them as madmen or genius, as you please, while the results, whether for good or bad, depending on the train of circumstances following the act; canonize them or relegate them to oblivion.

The day for genius has passed with the ignorance of past ages. The hard-working, intelligent plodder, whose temperament is balanced, is the man of the hour.

PSEUDO NEURASTHENIA.

Of all obstinate and unsatisfactory cases that fall to the lot of physicians pseudo neurasthenia probably takes the lead. Its symptoms do not differ materially from true neurasthenia, and require all your tact and diagnostic ability to differentiate between the two conditions. If you inquire into her earlier life you will find she was a bad tempered child, whose care-takers allowed her to have her own way, fretful, hysterical, sulky and having no sympathy for others. She is usually the product of our false system of bringing up children.

Solomon's precepts regarding the rod may be ancient, but they are as efficient to-day as when he wrote them. She gives you a train of symptoms in most forcible language.

Like the orator, "Her speech is at first low-toned and slow, sometimes her voice will deepen like the far off thunder of the coming storm and anon," &c., &c. She can neither eat nor sleep; is entirely helpless and is frequently bedfast; has the most awful pains, horrible headache and frightful spasms; you cannot touch any part of her body that she does not declare is exquisitely tender and the seat of the most excruciating pain.

While she recounts her tale of woe her face shows no sign of the agony she depicts, and if you watch her you find she overacts her part. She is entirely indifferent to the anxiety of parents or friends and seems to find a sort of pleasure in watching those about her in their unwearied efforts to comfort her and minister to her many wants. These cases not only succeed in deceiving every one of their friends, but usually end in deceiving themselves. We often find some disappointed affection or ungratified whim at the bottom of their maligning.

These are the cases that a decade or less ago were cured? by splaying—a mutilation that at least prevented a propagation of their kind. They are also the stock in trade of Christian scientists. The treatment will suggest itself from the following story of the greatest neurologist of the day, and we may add whose home is in Philadelphia. A very wealthy bed-ridden case, of two years standing, was brought to his private hospital for treatment. The case was one of false neurasthenia. On her absolute refusal to leave her bed under any circum-

stances the eminent scientist threw a lighted newspaper under her bed and told her to burn up and be d—nd.

She left the hospital cured in six weeks.

RECENT DISPENSARY LEGISLATION,

Through the untiring efforts of Dr. E. E. Harris, Chairman of the Committee on Legislation of the New York State Medical Association, a bill has just passed the legislature regulating the conduct of dispensaries in that State. The agitation looking toward this end had been carried on in a more or less desultory manner for a number of years. Owing to lack of united effort and the disinclination of any one to give up their entire time to the matter, no relief was obtained. The scornful remark made by a prominent politician that "the doctors did not represent anybody," certainly was a factor in bringing about an united effort to remedy the dispensary abuses. As a consequence of the effort made to pass this bill, certain other legislation pertaining to the medical profession was easily secured, and several pernicious measures were prevented from becoming laws. This success should stimulate the profession to greater efforts to secure the establishment of a Department of Health in the National Government.

MEDICAL LITERATURE.

In this rapidly moving age a great deal of crude material is necessarily or otherwise sent forth annually from our schools and colleges.

The demands of our constantly widening and expanding country, which is so rapidly increasing, both by an American born population and foreign immigration may, to a certain extent, excuse the hurry with which we turn out our medical men; not by any means deficient in a mass of facts and figures but so jumbled together as to require the most active mind and vigorous constitution to digest and assimilate them.

But we are young and vigorous as a nation; we are untrammeled by theories and impractable ideas, that are the bane of older nations, and in spite of earlier disadvantages we are struggling upward to a medical standing and a medical literature that shall be a standard for the *world*.

In current literature we lead the world at the present time; while in medical literature the indications grow stronger and stronger every day that foreigners will ere long as eagerly seek our productions as we formally sought theirs. We are, however, somewhat deficient in our periodical medical literature. Is it the fault of the profession, or are the publishers to blame?

Probably both—the publishers in sometimes catering to some special drug house, sanitarium, hospital or medical school; the profession in lacking the energy and industry to record their observations and practical experience at the bed-side. We do not mean by this that we have a dearth of writers—there is always a class, with no higher motive than a cheap notoriety, who are always rushing into print.

But we refer particularly to the old "war horses" who have borne the brunt of many a hard fight, men who have not had the time or money with which to investigate abstruse or rare subjects.

The modest men of the profession, the men of experience, whose words are as "apples of gold in pitchers of silver." These are the men at whose feet we would sit and be taught.

"KNOWLEDGE COMES, BUT WISDOM LINGERS."

The belief in primal and ultimate goodness is universal. Pessimism that doubts the providence of nature gets no hearing, and he who announces that sort of infidelity is self-exiled from the common aims of humanity. Worn and broken in the personal struggle, and bewildered though we may be by futile theologies, we yet rest in the belief that the universe was conceived in good and the power that made it will not fail to bring it to a due conclusion.

Of course, we each have our specific that we would like to apply to the slow-moving "mills of God," for life is but a span and before it closes we would use the talent that is in our keeping and rest our eyes upon a world enriched by a saving knowledge of tar-water, Christian science, single tax, or uric acid diathesis.

Now and again a word is spoken that takes its place among the cosmic forces and society is definitely influenced; life is never quite the same after that. The great poems have this quality, but avowed homiletics fail, and scientific exposition gets but a cold hearing when it seeks to impose restraint upon human conduct,

Our habits in regard to food, clothing and lodging do not at all represent our knowledge of sanitation; we live in hourly contradiction of such knowledge.

Our civic relations are no better. The man who burns with honest patriotism on the Fourth of July will sell his vote at the next election.

We have developed nothing in ethics to

match the splendid achievements in the arts and sciences.

And now we think of it, man himself is not nearly so well made as are many of the animals over which he is given dominion; but this is God's world, and He must know how to fetch it along.

KEEP THE BABY WARM.

Of all extrinsic conditions affecting the viability of the new-born child probably that of temperature is the most important.

The results of the use of the *couveuse* in the care of the most unpromising class of infants, the prematurely born, points to the inadvisability of the immediate bath.

It is important to lessen in any degree the shock to which the new-born child must be exposed in the series of changes that take place at birth. The feeble child is taxed to the utmost to maintain the functions of the heart and lungs. The cutaneous irritation and the loss of heat in the first bath must often be the straw too much in the case of the infants that succumb soon after birth. To defer the bath for twenty-four hours should be the rule in all cases and for a longer time than that in the case of the premature or poorly developed child.

Except for the care of the eyes in suspicious cases, the first toilet should be no more than the washing of the mouth and the rapid cleansing of the skin with oil, which is a better detersive than water, and it adds something to the nutrition of the child.

A daily bath of oil would be of great importance in the care of delicate children before the secretion of the mother's milk is established.

To maintain the animal heat and to keep up nutrition is the problem to be solved in the care of the infant and nothing is unimportant that helps to do either. The clothing should be of the simplest kind until after the circulation is well established in order to avoid the fatigue and exposure of dressing.

It should be remembered that the child has suddenly experienced a fall of about 30 deg. F. in its surroundings.

DIABETES MELLITUS.

Saundby truly says of diabetes, "There is probably no disease which is so overweighted by theoretical consideration." * * The striking clinical features of this disease has been a theme for medical writers from the early history of medicine. The term diabetes occurred in 150, A. D.

Sydenham, in the seventeenth century, wrote, "Let the patient eat food of easy digestion, such as veal, mutton and the like, and abstain from all sorts of fruit and garden stuff." Osler, in his Practice of Medicine, quotes this injunction and says it has lost none of its force to-day; yet there is not wanting much strong dissent, supported by evidence.

The tendency to uræmia and acetonæmia in diabetic patients on the meat diet has been indisputably shown. It is just as easy to prove a reduction in the amount of the glycosuria on the withdrawal of the carbohydrates from the diet; not so easy to prove a corresponding gain in the well-being of the patient. Theoretically the diabetic should be able to eat the fruits containing levulose. Practically they affect the patient just as unfavorably as do the fruits containing dextrose.

Leaving theories aside, the particular case will thrive best on a wisely-selected mixed diet, varied from time to time with the ability of the organism to use one or the other class of foods. The freest use possible should be made of the fats. Whether a given case is susceptible of essential improvement under any form of treatment, dietetic or therapeutic, depends upon the type of the disease in that case.

Diabetes may be induced experimentally by several unrelated procedures. Except for the mild form of alimentary glycosuria we are yet in the dark as to the real nature of diabetes mellitus as it occurs in practice.

We regret that in our last issue the very interesting, original article by Dr. W. Ross Thompson was, through an error of our press foreman, placed in the wrong department of our journal. It is for this reason that we reproduce it in present issue, placing it where it belongs among the original arcles.

BOOK REVIEWS.

Chemistry: General, Medical and Pharmaceutical, including the Chemistry of the U. S. Pharmacopœia. By John Attfield, F. R. S. New (16th) Edition. In one Royal 12mo. volume of 784 pages with 88 illustrations. Cloth, $2.50, net. Lea Brothers & Co., Philadelphia and New York.

There is very little need for a review or an introduction for a work which has reached its sixteenth edition, and this new edition of Attfield's Chemistry will no doubt meet with a warm welcome. There has not been a book published within the past thirty years that has reached the great popularity that has fallen to Attfield's Chemistry. It has been a household word for years and years. It has been the safe and trustworthy

guide of medical and pharmaceutical students throughout English speaking countries, and the demand for edition after edition from year to year made it possible always to keep the work strictly up to date. The present edition is no exception, and a comparison with the previous issue will show on every page the changes, additions and elisions made to present to-day's status of its ever-developing science. This work is a systematic exponent of the science of chemistry written mainly for pupils, assistants, and those engaged in medicine and pharmacy. The introductory pages are devoted to a few leading properties of the elements. A consideration in detail of the relations of the elementary and compound radical follows, synthetical and analytical bearing being pointed out, and attention frequently directed to connecting or underlying truths or general principles. The chemistry of substances met with in vegetables and animals are next considered. Chemical toxicology and the chemical as well as the microscopical character of morbid urine are then given. The concluding sections form a laboratory guide to beginners in the chemical and physical study of quantitative analysis. The chemical notation and nomenclature of the work are in accordance with modern views. Both the metric and avoirdupois weights and measures are used. There are many other points of interest which might be discussed, but space will not permit. In conclusion, he who wishes to study chemistry, from an up to date standpoint, will certainly accomplish his purpose by selecting Attfield's.

The International Medical Annual, 1899. A Work of Reference for Medical Practitioners, (Alphabetically arranged) combines the features of an annual retrospect with those of a Medical Encyclopædia, copiously illustrated with elegant plates, in colors and black and white. Each volume contains entirely new Matter. Price in cloth, $3.00. E. B. Treat & Co., publishers, 241-243 West St., New York.

We have before this expressed our admiration of this Annual and our surprise at its comprehensiveness. This, the seventeenth year of this well-known work, is superior in excellence to any of its predecessors. It is larger by 760 pages, better illustrated, 15 full page colored plates, and 12 full half-tone plates, beside numerous illustrations in the text. While the book is condensed very carefully, yet it is sufficiently explicit to give a clear idea of the subject presented. Part I. considers the Dictionary of New Remedies. Part II., which is by far the greater portion of the book, is devoted to New Treatment. The remaining portion is devoted to pathogenic bacteria, Legal Decisions and Sanitary Science. The arrangement of the work is alphabetical, and with its complete index, makes it a reference book of rare worth.

In short, the "Annual" is what it claims to be—a recapitulation of the year's progress in medicine, serving to keep the practitioner abreast of the times with reference to the medical literature of the world. The price of the book is $3.00

No physician can afford to omit this work from his library, as he will find it continually of the highest value in reference and in obtaining approved and successful modes of treatment.

The Anatomy of the Central Nervous System of Man and of Varieties in General. By Prof. Ludwig Edinger, M. D., Frankfort-on-the-Main. Translated from the Fifth German Edition by Winfield S. Hall, Ph.D., M. D., Professor of Physiology in the Northwestern Medical School, Chicago. Assisted by Philo Leon Holland, M. D., Instructor in Clinical Neurology in the Northwestern University Medical School, Chicago, and Edward P. Carleton, B. S., Demonstrator of Histologic Neurology in the Northwestern University Medical School, Chicago. Illustrated with 258 Engravings. 6¾x9½ inches. Pages xi-446. Extra Cloth, $3.00. The F. A. Davis Co., Publishers, 1914-16 Cherry St., Philadelphia.

This large and most comprehensive work is divided into three great divisions. Part I is devoted to an introductory, giving the *fundamental ideas* accepted at the present time. It takes into consideration also *function*, which was not considered in earlier editions.

Part II is devoted to a Review of the Embryology and the comparative Anatomy of the Vertebrate Brain.

Part III is devoted to the special Anatomy of the Mamalian Brain, with special consideration of the Human Brain. The work closes with an Index of Authors; an Index of Corporative Neurology and a General Index. The first chapter gives a fine review of the history and the methods of investigation of the central nervous system. "As our century dawned there was scarcely anything of importance to be added to the gross anatomy of the organs of the central nervous system. Little progress had been made, however, in what we must now recognize as the most important part of the morphology of the central nervous system, namely, in the knowledge of the finer relations of the parts—of the course of the fibers." The above is a section taken from the first chapter, thus showing the advancement made up to the present time.

In each chapter the complexity of the subject is made plain. There is no one who will doubt but that this is a very deep subject to master, and he who views and studies this work will readily see the author is master of his subject. This somewhat dry subject has been made charmingly interesting. The illustrations, diagrams are splendid and assist very materially. The book is beautifully printed on fine paper and concludes with an index of over 36 pages, which in itself is an indication of the care with which it has been prepared.

The Principles of Bacteriology. A Practical Manual for Students and Physicians. By A. C. Abbott, M. D., Professor of Hygiene and Director of the Laboratory of Hygiene, University of Pennsylvania, Philadelphia. New (5th) edition, enlarged and thoroughly revised. Handsome 12mo., 585 pages, 109 illustrations, of which 26 are colored. Cloth, $2.75, *net*. Philadelphia and New York, Lea Brothers & Co.

This book is recognized to-day as the leading text-book on Bacteriology. Until recently this department in medicine has been sadly neglected, scarcely an allusion to its importance, but to-day its importance is seen by its being in the curricula of all Medical Colleges. As the advances went on from year to year in this branch, so improvements, additions and revisions went on in this work, until to-day it is as complete as time, energy and ability can make it. The author presents the important ideas and methods as concisely as is compatible with clearness and at the same time to accentuate throughout the underlying principles which govern the work.

The reason of the great popularity of this work is made clear by reading its pages. The author has chosen just that knowledge which is practically important to the student and practitioner and has presented it with an unusual clearness. The work contains ample instruction for laboratory work. The illustrations, both black and colored, are excellent, notwithstanding that much new matter has been added and the book much enlarged, the price remains the same.

An Essay on The Nature and Consequences of Anomalies of Refraction. By F. C. Donders, M. D., Late Professor of Physiology and Ophthalmology in the University of Utrecht. Revised and Edited by Chas. A. Oliver, A. M., M.D., (Univ. Pa.) Phil.: P. Blakiston's Son & Co., 1012 Walnut St. 1899. Price, $1.25.

In the preface of this book it is stated that the Editor has not attempted in any way to draw a comparison between the author's and his own thoughts and beliefs on the subjects treated in this volume. It has been his sole desire to give a great man greater honor, and to offer such a man's work an increased amount of usefulness. It is remarkable that this man's work should have so much real truth in it, and that his deductions should be so certain of application to newly acquired facts that were unknown at the time he gave his results to the physiologic world. The little work is beautifully gotten up, handsomely bound, and printed on elegant white paper,

Maisch's Materia Medica—New (7th) Edition. A Manual of Organic Materia; Being a Guide to Materia Medica of the Vegetable and Animal Kingdoms. For the use of Students, Druggists, Pharmacists and Physicians. By John M. Maisch, Phar. D., Professor of Materia Medica and Botany in the Philadelphia College of Pharmacy. New (7th) Edition, thoroughly revised by H. C. C. Maisch, Ph. G., Ph. D., Professor of Materia Medica and Botany in the Medico-Chirurgical College of Philadelphia, Department of Pharmacy. In one very handsome 12mo. volume of 512 pages, with 285 engravings. Cloth, $2.50, *net*. Lea Brothers & Co., Publishers, Philadelphia and New York.

Maisch's Materia Medica has long enjoyed the position of a standard text-book throughout the Colleges of Pharmacy of this country. This, the seventh edition, comes to us thoroughly revised, enlarged, and incorporates all recent advances, and introduces such substances as have attained medical importance since the last issue.

This work is divided into Part I, which considers Animal Drugs. Under this section is considered animals, eggs, anastomosing fibrous tissue, membranous tissue and gelatins. Secretions and excretions and calcareous skeletons and concretions. Part II treats of Cellular Vegetable Drugs. Begins with Roots and closes with Cellular Drugs not readily recognized as distinct organs of plants. Part III considers Drugs without cellular structure; beginning with extracts and inspissated juices and closing with fixed oils and waxes. This work enables us to recognize drugs, determine their quality, detect their adulteration, and to distinguish the characteristic elements of those which are closely allied. The author touches but slightly upon medical properties and doses of various drugs and the treatment of poisoning from excessive doses of poisonous drugs. This work fulfills every requirement of a work of this nature. The illustrations are many and fine. The printing clear, and binding substantial.

Saunders' Medical Hand-Atlases, Atlas of the External Diseases of the Eye, Including a brief Treatise on the Pathology and Treatment By Prof. Dr. O. Hoab, of Zurich, Authorized Translation from the German. Edited by G. E. deSchweinitz, A. M., M. D., Prof. of Ophthalmology in Jef. Med. Col., Phil. With 76 colored plates. Philadelphia: W. B. Saunders. 1899. Price, $3.00, net.

Saunders' Hand-Atlases are growing in popularity every day. Their utility from a practical and clinical standpoint is the cause of so great a success. This volume, along with the preceding Atlases, will prove a thoroughly practical manual for the every day use of the practising physician. The author begins with the examination of the eye, with functional testing, the student is easily and gradually led from one examination to another until at the close the reader almost feels he has been to a clinic. Following this are the chapters on the diseases of the eye, the most important of which are very clearly described, and the best therapeutic measures given.

The work contains an admirable series of plates to which is appended a brief clinical history which beautifully illustrates the text. A good index closes the volume.

David Harum, A Story of American Life. By Edward Noyes Westcott. New York: D. Appleton & Company. 1899.

This is the most readable book that has been written in many years. It is not only full of genuine interest from beginning to end, but it also contains more common sense, real "hoss" sense than any book we have read. The reader has only to begin the book, and he will be certain to finish it. It is a model book, a gem. The character, David Harum, is perfectly splendid. The rich, uncouth, seemingly selfish and hard-hearted, though quite the reverse, old banker, is the prominent character in the work. "The's as much human nature in some folks as the' is in others, if not more" —David Harum. "Do unto the other fellow the may he'd like to do unto you—an' do it fust." These are two trite sayings of David Harum. David Harum was not only a rich liberal-hearted banker, but he was the best horseman, the best judge of a horse, the best horse trader in Homeville, his native village. His one prevailing theme was the "*hoss.*" John Lenox is also a fine character. He was David's trusted and confidential banking clerk. The mutual attachment and fondness that grew between John Lenox and David Harum was very great. The sign that hung before Harum's Bank before John became his clerk was simply David Harum, Banker. Under the successful management of the affairs by John Lenox—the sign afterwards read, Harum, Lenox & Co., Bankers. Throughout the book runs a most beautiful love story, and John Lenox is the leading man. For pleasure, for recreation, for edification, for valuable suggestions and information we beg every physician to read David Harum. It is tastefully and prettily printed and bound by D. Appleton & Co.

A Practical Hand-Book on the Muscular Anomalies of the Eye, by Howard H. Hansell, A. M., M. D., and Wendell Reber, M. D., 28 illustrations and 1 plate. Philadelphia: P. Blakiston's Son & Co., 1012, Walnut St., 1899.

This work will serve a most useful purpose to beginners in ophthalmic work. It presents the principal facts in the diagnosis and treatment of abnorml states of the eye-muscles. It is an elaboration of a short series of lectures delivered in successive winter courses at the Philadelphia Polyclinic. The authors have clothed their thoughts in language easily understood; they have avoided discussions and speculations; have employed methods that have stood the test of their own experience, and without giving the volume the proportions of a book of reference have omitted no important data that have been recognized as trustworthy.

Relinoscopy (or Shadow List) in the Determination of Refraction at one meter Distance, with Phone Mirror, by James Thorington, M. D. Third Edition, Revised and Enlarged. Forty-three Illustrations, twelve of which are colored. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut St. 1899. Price, $1.00.

This little work contains 84 pages with a good index. It elucidates in as concise a manner as possible, the method of applying relinoscopy which has given most satisfaction at the author's hands. It not only can be used with advantage by college students and post-graduates but there is also in it ample material given whereby the ophthalmologist at a distance may acquire a working knowledge of the method, by study and practice in his own office. The volume is neatly printed and bound.

Practical Materia Medica for Nurses with an Appendix, by Emily A. M. Strong, Graduate of the Training School for Nurses, Lawrence, Mass., &c. Philadelphia: W. B. Saunders, 925 Walnut St., 1899. Price $1.50.

The first part of this book is devoted to the general consideration and classification of drugs. Under this head is given Local Remedies; the six principal avenues of medication; Absorption of Medicines;

Dosage. Under the head of Classification of Drugs is given alteratives, anæthesis, &c. The second part is devotsd to the subject matter proper, the Materia Medica. Each drug is very briefly and concisely tested, with the proper dose and uses.

The third part or appendix contains poison-emergencies, poisons and their antidotes, emetics, mineral waters, weights and measures, dose-list, glossary, &c. The doses of all drugs have been given in both the apothecaries and metric weights. The book contains 306 pages with a neat substantial binding.

Surgical Nursing. By Bertha M. Voswinkel, Graduate of Episcopal Hospital, Philadelphia, &c. Second Edition, Revised and Enlarged, with 112 Illustrations. Phil.: P. Blakiston's Son & Co., 1012 Walnut St. 1899. Price, $1.00.

Those who wish to become familiar with the art of nursing can do so by purchasing this book at the nominal sum of $1.00. It gives a concise and clear outline of surgical nursing in general, together with a list of antiseptic agents, the mode of preparation of the various materials used in antiseptic and aseptic surgery, and the application of splints and fixed dressings. Under each chapter where it is necessary will be found excellent illustrations. It is neatly printed and nicely bound, and is a very practical and useful book.

Gerrish's Anatomy by American Authors.

Gerrish's forthcoming *Anatomy by American Authors* promises to be the work for which teachers and students have long been looking. Its editor, Prof. F. H. Gerrish, of Portland, has selected as his fellow-contributors leading anatomists throughout the country, wisely restricting their number to accord with the best division of the subject, gaining thereby unity in result joined with the highest authority. The list includes Professors Bevan, of Rush, in Chicago, Keller, of the University of Texas, McMurrich, of the University of Michigan, Stewart, of the University-Bellevue College in New York, Woolsey, of Cornell Medical College, likewise in New York, and Gerrish himself, who is not only editor, but perhaps the largest contributor.

The plan of the work judiciously avoids the unimportant and exceptional, reserving its space for those portions of anatomical knowledge which are necessary to the intelligent study of physiology, surgery and internal medicine. The authors have endeavored to stand in the place of a living teacher to the student, selecting such portions as will be of actual service to the pupil in his study and to the practitioner in his subsequent clinical work, clarifying obscurities, giving most difficult parts, and illustrating everything by all available methods. Pictorially *Gerrish's Anatomy* will be by far the most lavish work ever offered on a subject which can already boast of many elaborately illustrated text-books. The engravings number about one thousand, their size is large enough to make visible every detail, colors have been employed more liberally than ever before, and lastly the labels of the parts have been conspicuously engraved upon them whereby a glance gives not only their names but also their position, extent and relations, obviating entirely the slow, toilsome and wasteful mental processes necessitated where only reference letters are employed.

In an early issue we shall give our readers a review of the book itself.

Transactions of The American Pediatric Society, Tenth Session, held in Cincinnati June 12th and 13th, 1898, with an Index of Vols. I to x, Edited by Floyd M. Cransdall, M. D., Vol. x; Reprinted from The Archives of Pediatrics, 1898.

The papers presented at this Society are very fine. The collective investigation on infantile scurvy in North America is an interesting and valuable synopsis and will be well worth any physician's time to read it. The subject of milk used in infant feeding is also a valuable and suggestive article by Freman. Many other most excellent papers are found in the volume. L. Emmett Holt is President and Samuel S. Adams is Secretary. The volume is neatly printed and nicely bound.

Transactions of the American Surgical Association. Volume the Sixteenth. Edited by De Forest Willard,, A. M., M. D., Phil.

This volume contains an excellent portrait of Dr. Hayes Agnew as frontispiece. These transactions form an elegant volume of over 300 pages, and are filled with material of the very highest order. The men who govern this society are the leading lights of the world and as a natural consequence their writings are highly prized. William W. Keen, A.M.,, M.D., LL.D.,, is President, and Herbert Burwell, M. D., is Secretary.

LITERARY NOTES.

"Princess Nadine," by Christian Reid, the complete novel in the May issue of *Lippincott's Magazine*, appeals strongly to every lover of romance. The introduction of the Russo-American Princess at the Mi-

Careme and Battle of Roses at Nice, where she is fittingly framed by a pink-tinted seashell of roses, and where she is seen for the first time by a wealthy Central American, who is to influence her after-life, surely compels attention. That this man, whose indifference to the fair sex is exceptional, should imperil his life for her seems but natural, as we see, combined with the charming personality, a character unspoiled by adulation; sympathetic, faithful, and brave. The story can be said truly to be among the best work of this popular writer.

The *American monthly Review of Reviews* of May devotes considerable space to a survey of recent developments in American cities. The editor comments on the re-election of Mayor Carter Harrison in Chicago, on Mayor Jones' remarkable triumph in Toledo, on the Detroit project of the municipal ownership of the street railways, and on the general situation in Boston, San Francisco, Minneapolis, Cleveland, Denver, St. Louis, Philadelphia, Pitttsburg, and New York. Dr. Shaw also contributes a special study of the new San Francisco charter—a remarkable document in its way, and Mr. George E. Hooker gives some interesting facts about Mayor Quincy's administration of Boston.

Scribner's Magazine for May has secured from Major-General Leonard Wood, the military governor of Santiago, the first official account of the great work which has been accomplished in that province. It is practically the making of a State by a military dictator, all of whose purposes are benevolent, and who has no legislature or other authority to consult—deriving his power directly from the President of the United States. General Wood's narrative, which is the only thing that he has written, is marked by a forcible directness and modesty in telling of the things accomplished.

The way in which the city was cleansed, the indigent relieved, the streets repaved, schools established, and all of the machinery of a civilized government instituted, is a remarkable record of achievement in military government. The illustrations contrast the old Santiago with the new, and show the work of regeneration.

The leading characteristic of The Forum during the thirteen years of its existence has been its impartial discussion of questions of the day. The May number admirably illustrates this feature by the presentation of two articles on the Trust problem. Aldace F. Walker, formerly an Interstate Commerce Commissioner, and now chairman of the Atchison, Topeka and Santa Fé Railway Company, writes on "Anti-Trust Legislation;" and Wilhelm Berdrow, the eminent German economist, discourses on "Trusts in Europe." The temperate tone of these papers is excellent; and they form a valuable contribution to the discussion of this burning question.

The authorship of the Etchingham Letters, which has been running anonymously as a serial in The Living Age since the first of January, is now disclosed. The letters are the joint work of Mrs. Fuller Maitland and Sir Frederick Pollock, a combination which goes far to account for their range and cleverness. The publication in The Living Age is by a special arrangement with the authors. The Letters will soon be published in book form.

MISCELLANEOUS.

Board of Medical Examiners.

The Board of Medical Examiners of the State of North Carolina will meet in Asheville, N.C., Thursday afternoon, May 25th, 1899; all applicants are urged to be present at this time to register and be ready for examination on the following morning.

THOS. E. ANDERSON, M. D.,
Sec. Board Med. Ex., Statesville, N.C

Malaria.

Thayer says: Malarial fever is a specific, infectious disease, due to parasites which exist in the blood of the infected individual in great groups and give rise to paroxysms at the periods of their sporulation.

There are three varieties of malarial parasites—one associated with quartan fever, one with tertian, and one with paroxysms, which occur usually about forty-eight hours apart, but occasionally at more frequent intervals, while often the fever is irregular or continued—the estivo-autumnal parasite.

Either of the first two varieties of parasites may also give rise to quotidian fever, owing to the presence of multiple groups of organisms undergoing sporulation on successive days.

The paroxysms in infections with the tertian and quartan parasites are usually regularly periodical in their time of onset. In infections with the estivo-autumnal organism they are often irregular and associated with continued fever.

We do not know how the parasites live

outside of the body, or how infection takes place.

Experiments tend to show that it is improbable that infection occurs through the gastro-intestinal tract. It is possible, though not proven, that it may occur through the respiratory apparatus or through the skin, being introduced by the bites of insects, especially the mosquito. By analogy with the course of events in similar infections in birds, it is highly probable that the mosquito may play the part not only of an intermediate host of the malarial parasite, but also of a direct transmitter of the infection from one individual to another.

Quinine, properly administered, is a true specific against the disease.

Relapses may occur after weeks or months, but they are in turn amenable to treatment.

How to Limit the Over-Production of Defectives and Criminals.†

Upon the solution of this problem hangs the fate of home, nation, and civilization. It is the concern of all good citizens to do something to improve posterity. During the past ten years the population of the United States has increased 25 per cent., but during the same period crime increased 60 per cent. The cost to the public for the care of defectives and for the prosecution and support of criminals is enormous, to say nothing about the destruction of life and property, confidence and morality. We go on building asylums, hospitals, reformatories and prisons, and we keep them full. Imbecility, idiocy, insanity, epilepsy, deafness, blindness, incorrigibility, youthful waywardness, adolescent vice, immorality, and adult criminality multiply apace in the land. It is high time to improve the method of preventing over-production of defectives and criminals. We are too prone to assail results or salve over the surface of our social sore, leaving the roots untouched. No one can afford to ignore this subject. It concerns every taxpayer, and every one who makes his own living is a taxpayer, whether he own real estate or not. The problem consists of prevention, reformation and extinction. The basic causes of crime must be attacked.

The ancient uncivilized nations knocked their old men and old women in the head; strangled the superfluous babes between thumb and finger or left them to perish upon the mountain side; and threw their defectives into the water or fed them on the juice of the poppy as a less brutal means of effecting their exit from this world. Criminals among inferior peoples are comparatively fewer and are not dealt with tenderly. A dose of tomahawk ends their career. They are little or no tax upon the public, and they are very little in evidence. The lower stratum of development in savagery and barbarism produces comparatively fewer defectives than do the enlightened and educated strata. While the highest types of individual and national growth, power, education and excellence are attained in our modern social development, nevertheless, the wayside is strewn with failures; although defectives and criminals are largely bred from the same classes, a great many recruits come from families of high standing. It is not necessary to scan very far along even good family lines until you come to a stray sheep, and often a black one at that. A defective and a genius may be found in the same family.

The Roman and the Greek laws did not bother much with moral improvement. The best test of modern civilization is shown by the way the defectives are treated. Society admits that the criminal has some rights which it is bound to respect; and not the least of these is the right to reform. The defectives must be cared for in the most humane and conservative manner. Barbarism and brutality are not economical for up-to-date nations.

PSYCHOLOGY OF CRIME.

Although criminal offenses appear to be spontaneous and impulsive, yet if they could be traced they would be found to be due to a variety of causes. Modern science teaches that nothing *happens*. Everything that comes to us is pushed from behind. In society, as organized at present, there are constantly at work forces which germinate crime and disorder. Seven thousand murders take place annually in the United States. Ninety per cent. of the reading matter upon which the community feeds tends to disintegrate character and bring disorder and abnormity into prominence. Our daily and weekly papers are devoted largely to illustrating crime and immorality. The sediment left after the reading of murders, suicides, thefts, and immoralities, poisons the youthful minds and leaves indelible scars upon their tender souls. All pictures thrown upon the mental canvas modify their recipient accordingly as they are good or evil. Persons are swayed by the character of the pictures before which they linger. The scientific way to destroy evil is not to hold up and analyze it in order to make it hateful, but rather to let it pass out of consciousness. If we hope for im-

†Dr. J. H. McCassy, Dayton, Ohio. Abstract from Journal of Amer. Med. Association.

provement in the generation unborn we must dull the appetite for "blood-and-thunder" fiction. It is useless to ask the publishers to abandon a paying business. By a crusade of education against vice, we must lift the minds of our generation above the present demand for sensational reading matter.

All education, physical, mental or moral, is primarily a cultivation of powers of resistance. Cares, anxieties, business and social difficulties prey upon the mind; and if they are not repelled insanity is the result. Depraved natural appetites, if unrestricted, result in crime. We guard against physical disease by building up the tissues and selecting healthful environment. We guard against mental disease by educating the mind and avoiding pursuits that bring excessive intellectual strain and dissipation. We may guard against crime by educating the higher ethical sense and by removing the temptations to wrong-doing. Certain mental equipments are suitable for certain occupations. When a person selects proper pursuits in life success and happiness will likely follow, but a wrong selection brings misery and crime. There came to my notice a case which illustrates one phase of this subject. Two brothers, many of whose relatives had gone insane, started to study medicine. The strain on both to keep up with the class was great. When they were nearing the end of the second term, one of them went hopelessly insane. The other studied the literature of his case, and when he found inherited insanity in his family history he concluded to abandon further study of medicine. He went to farming and made a great success in raising cattle and hogs. He said that the nearer he got to the simple ways of living the better he felt. He became a good and prosperous farmer.

The criminal differs from the normal being in the fact that he has less power of resisting crime. We all have the criminal tendency more or less, but it is suppressed by cultivating higher instincts. If the child of the criminal is allowed to grow up under the tutorage of crime he will be a criminal. If the same child is brought up in a good family, the results will be better. It will not, however, do to depend too much on environment. Favorable environment will overcome imbred propensities to a certain extent, but in many cases, where there is too much to overcome, the over-mastering criminal propensities will land the unfortunate victim outside of the pale of good organized society. In this fact lies the great responsibility of childless families in procuring recruits from the Orphans' Home. Years of unremitting toil and loving care may be reduced to naught by the explosion of their inheritance of vice. Take, for example, Bessie Little, of Dayton, Ohio, who was taken from the Orphans' Home and reared in a good family. She got along very well until she reached full maturity. Then her born erratic tendencies and insatiable egotism took possession of her. She loved Franz, her slayer, in his presence and hated him in his absence, because her judgment was dethroned by her passions. In this case the best environment was inadequate to overcome her inheritance of vice; she broke down and became a criminal.

Heredity is nearly everything. "Blood will tell," and blood does tell. A born idiot can never be more than an idiot, but these form only a very small percentage of the defectives. Of all the streams of evil that flow into the national blood none is more virulent than that of imbecility. It is the legitimate offspring of the jail, the infirmary and the insane asylum. What a remarkable lesson there is in the case of Max Jukes of New York State. He was a Dutch settler, born about 1740, a hunter and fisherman. He was a great drunkard, and the progenitor of 1200 persons, nearly all criminals, vagabonds, paupers and prostitutes. In seventy-five years the descendants of Jukes committed 115 criminal offenses. Not more than 20 of them were skilled workmen, and ten of these learned a trade in prison. This family cost the State of New York one million dollars. Crime, imbecility and insanity are due in 60 to 75 per cent. of cases to heredity. We do not expect to entirely eliminate bad blood from the race, but that we can greatly lessen it is both possible and probable.

Insanity is much more prevalent among the Quakers or Friends than any other religious sect, perhaps, because of their sadness and gloom in religious worship. Insanity is less prevalent among the colored people than any other race, because of their simple wants and happy disposition. The general causes of insanity are: heredity, 50 to 60 per cent.; whisky, 12 per cent.; religious perversion, 10 per cent.; disappointment in love, 10 per cent. Eighty per cent. of drunkenness is due to heredity; alcohol causes 33 per cent. of the diseases, 75 per cent. of the crimes, and 50 per cent. of the poverty that afflicts our race. Intemperance of parents causes 34 per cent. of the imbecility in children. Drunkenness in the parent may not be followed by drunkenness in the offspring, but epilepsy or kleptomania, hysteria or apoplexy in the mother may be followed by some form of insanity in the offspring. Parents transmit not alone

their inherited tendencies, but their acquired peculiarities as well. There are 100,000 orphans in the United States. One-fourth of these are classed as juvenile delinquents or defectives. It costs ten million dollars a year to care for those orphans. Dr. John S. Billings, in charge of the Census Office, gave us the following figures for the whole United States in 1890: Insane, 106,254; imbeciles and idiots, 95,571; blind, 50,411; deafmutes, 41,283; paupers, 73,045; prisoners, 86,000.

SEX IN RELATION TO CRIME.

Females, being physically weaker than males, are addicted to crime only one-fifth as frequently, and only excel the males in the commission of poisoning and infanticide. Woman's natural form of retrogression is prostitution.

SEASON IN RELATION TO CRIME.

Crime against property are more prevalent during the cold season of the year and in cold climates, while crimes of passion and against the person are more prevalent in warm climates and during the hot season of the year. Intemperance is prevalent in the temperate zone. The boy asked his farther how it happened that people drank so much beer and whisky in the temperate zone.

CAUSE OF CRIMINALITY AND DEFECTIVENESS.

Population has increased too rapidly. More children have been born to poor people than they could rear properly. To raise and educate properly one child requires enormous outlay. To raise properly one child would be a big task for most husbands and wives, to say nothing about six or ten children. Parents of education and means rarely have more than two children. If they have a third child, it is a mistake. This is the cause of a lack of growth of the population at the top and of an excessive growth of the population at the bottom. According to vital statistics it takes on an average about 3½ children to each couple to propagate their kind. Too many people are heedless of all Biblical commands except "multiply and replenish the earth." The next great basic cause of crime and defectiveness is the implied inferiority of women. The idea of woman's inferiority has come down to us from a barbarous past. The man-made laws have, all along the line, accorded the male sex dominion over the female, which has placed millions of girls and women at a disadvantage in the struggle for bread, and which compels thousands of them yearly to accept degradation or starvation. This has kept the normal fabric of society weak. Improvement in our race is an idle dream nutil woman is accorded perfect justice and placed squarely on equality with man. The helpless slavery of woman, with the attendant evils of enforced motherhood must be relegated to the rear as a crumbling relic of barbaric injustice. If the father be the head and the hands of the family, *the mother is the heart.*

A child has a right to be well born. The man whose destiny is unfavorably formed for him by his ancestors is to be pitied. Many of the rich and poor are alike born into this world with an inheritance of vice and degradation. They are crippled from the very beginning, and have only half a chance for health and prosperity. The end and aim of sex and sex-relation is simply the perpetuation of the species. Sex relation has been diverted from its proper mission. As an example, 40,000 abandoned women are to be found in the city of New York. The *Arena* for January, 1898, gives the following figures for Massachusetts, New York and Illinois: Sixteen per cent. of the married men desert their wives after the birth of the first child, and 28 per cent. after the birth of the second child. The children of such parents are placed at an immense disadvantage. Add to this the work of the wholesale divorce mill and it will be apparent that marriage to a considerable extent is a failure. Women have opened their eyes to this condition, and as a result 18 per cent. of women of marriageable age in the United States have equipped themselves for earning a living independent of man. She is a worthy competitor of man today in manufacturing,mercantile, professional and other pursuits. When women can completely assert their independence there will be improvement in motherhood. Improved motherhood is the safeguard of the generation unborn.

Our civilization has developed so rapidly that it has retained many of the elements of barbarism and savagery. A relic of savagery is inculcated in this: "He who would not avenge an insult is no man." "Manly dignity can be preserved by executing justice himself, not waiting for the medium of the law." In this way violence comes to be regarded as a virtue, revenge as a duty, and crime as heroic. In this there is a tendency to return to barbarism which blunts the moral sense. The second phase of modern civilization is characterized, not by violence and crimes of blood, but by craft and deceit, as adulterations in commerce, tricks of exchange and official fraud. There is a choice of becoming either hammer or anvil; the person who

cannot crush another without feeling pain must remain an anvil. Still the weak must serve the strong. The world bows to him who possesses more than others. This is the state of society, notwithstanding the bombastic and hypocritical assurance of brotherly love. Never before in the world's history has a person needed keener wit, greater frugality and prudence to make a living than now. The struggle is fierce and many are falling by the wayside.

Heredity is the great causal factor of crime. Next to this comes intemperance, which depends largely upon the former. It is not encouraging to note that the legal or legislative handling of intemperance has been a failure either in prevention, restriction or cure. The drink habit is still spreading. The greater portion of crime arises out of our social conditions and is amenable to reformatory measures. Only about 20 to 25 per cent. of criminals are born criminals. Three-fourths of the crime in our land is caused by neglected education.

Another source of the multiplication of crime in this country is the almost unrestricted immigration of the lower classes of foreigners from all lands. Our population has 20 per cent. of foreigners in it, but they furnish more than half the inmates of our reformatories, one-third of our convicts and three-fifths of the paupers supported in almshouses (F. H. Wines, D. D.; Report in 11th Census).

Another cause of crime and pauperism is the undue flocking of the urban population to the cities. Our jails and prisons are simply high schools of depravity and nurseries of criminals. In the jails our courts hustle ravishers, corrupters of youth, murderers, burglars, thieves, drunkards and all the foul members of society, with children convicted of petty larcenies or of incorrigibility, with detained witnesses and people accused of misdemeanors or crimes not yet tried. The inmates of the jail are liberally supplied with tobacco and cards. The junior offenders soon become assimilated to their hardened companions, and join the ranks of crime. The very air about the jail or prison reeks with crime. The criminal serves out his sentence in comparatively comfortable quarters, or he is pardoned out and turned loose upon a long-suffering public, upon which he preys and commits atrocities with increased skill. It is said that only about one-tenth of the criminal offenses are detected and punished.

In our advanced state of civilization, excessive culture has introduced new forms of crime, such as homicide for life insurance and the abuse of alcohol, cocain, opium and other narcotics. The negro was transplanted on American soil against his will by the whites and kept in slavery 260 years. The negro forms 12 per cent. of the population of the United States; commits 32 per cent. of the crimes; contributes 8 per cent. of the paupers and only 5 per cent. of the lunatics.

To sum up the cause of the over-production of defectives and criminals, it can be stated in one sentence, viz: Disobedience to the laws of nature and of physical hygiene during the present or preceding generations. From the cradle to the grave man is in constant danger from the effects of violated laws.

HOW TO REMEDY THE OVER-PRODUCTION OF CRIMINALS AND DEFECTIVES.

This will involve a removal of the causes just enumerated. Society concerns itself too much with the punishment of crime and not enough with the prevention of it. The lessening of crime is as much a subject for education as for legislation. There is little use in passing laws in advance of public sentiment. Only one person in ten who has an opportunity to steal is restrained by thought of law. His conscience declares that it is wrong and that is enough. Good healthy sentiment needs to be awakened with a view to the suppression of crime. Wholesome laws will follow in the wake of public sentiment. A law without the moral support of the community is useless. If society stamps out crime it will not be the work of one generation, or of any single specific. A great many remedies must be tried. Punishment holds crime in check only, but does not put an end to it. Crime is more formidable than pauperism and is almost as costly. Only a small percentage of the evils afflicting society spring from want. A small number of crimes are due to sheer want of food. But prosperity generates criminal inclinations as well as does adversity, and on the whole the rich are about as much addicted to crime as the poor. Increase of material prosperity may reduce crime against property, but it increases drunkenness and crimes against the person. Increase of wealth must be accompanied by a healthy growth of morals to be a benefit to society. Our educational institutions could accomplish more if more prominence was given to instruction in conduct and morality, but it is more essential that these should be taught and practiced in the homes; and to this end improvement of motherhood is indispensable. In the proper training of young children lies the best means of the prevention of defectives and crimin-

als. A child at the age of five or six years has imbibed many ideas that cling to him during life. I lay great stress upon the training of the rising generation, because more can be accomplished by preventing the formation of bad habits in the young than by trying to reform confirmed transgressors.

PRISON REFORM.

The treatment of the criminal should fit him rather than the crime. The nature of the criminal should be studied, and suitable chastisement meted out to him. It should be corrective rather than punitive. A course of instruction in conduct and the duties of citizenship should be part of the prison work. The youthful offender should be dealt with kindly. The efficacy of fines should be well tried before resorting to imprisonment. Junior offenders should not be classed with old offenders. Offenders for the second and third time should be classed as life convicts, and be compelled to "work out their own salvation." There should be rewards for toil and punishment for idleness. Labor organizations are on record that convicts should work, but for thirty years they have protested against convict labor coming into competition with free labor. Convicts should work, but how to employ them judiciously without having their labor come into competition with free labor is difficult to solve. The product of their labor should go in the direction of manufacturing articles for the charitable and penal institutions. No one should object to this. Capital punishment is a crumbling relic of barbarism. The murder is not put to death as frequently as formerly. In another generation the death penalty will be abolished. Two wrongs do not make a right. It is folly to slander the slanderer or to steal from the thief. The death penalty used to be inflicted in public, but it was found that publicity of crime was detrimental to the suppression of crime. Many people commit crime from imitation by seeing it illustrated in the newspapers. The term sentence for prisoners should be abolished. The curable should be cured and the incurable should be kept for life in seclusion, at self-sustaining labor. It would be ridiculous to sentence a lunatic to an asylum for one or two years. The criminal should be given an immediate sentence and his liberty should be abridged until he proves himself worthy of the confidence of the community. The board of pardons should be made up of the sentencing judges, the warden of the prison and one of the chief justices of the State. This board should meet quarterly, hear evidence and correct mistakes of sentence.

According to sanitary laws, your house may be quarantined and the family prohibited from mingling with the public. According to the school laws your children are taken from you five hours per day, from the age 8 to 14 years, for educational purposes. In view of all this, it seems reasonable that laws could be enforced to keep poison out of the blood of the nation. The State should abridge the liberty of criminals and defectives earlier in their career of destruction. The truest kindness to the defective is to prevent him from being born, because he is his own greatest curse. Often the greatest liberty is the greatest curse and danger. The issuing of marriage license should be restricted by requiring medical and other affidavits to be filed with the probate court showing that the applicants for marriage license are free from insanity, criminality and other hereditary taints. The great majority of defectives and criminals can earn their own living under efficient supervision. There should be more institutions in the land like the Elmira Reformatory, and colonies for the care and keeping of defectives. The outlay now would prove a great saving in the future. Prevention is better than cure. It is better to keep the murderer from coming into existence than to smooth his pathway to the gallows. It cost the State about $20,000 to try Durant; $20,000 to try Jackson and Walling: $25,000 to try Luetgert. The cost to the State for trying an alleged murder, if put on interest, would keep a person a whole lifetime in comparative luxury.

ASEXUALIZATION.

I have given this subject much thought. I have felt the pulse of the public for a long time in the radical and conservative arteries. I think the treatment would be effectual, but the difficulties lying in the way are at present insurmountable, except for friendless paupers. It would be impossible to follow it out through all the ramifications of heredity when genius and insanity, brilliancy and imbecility are found in the same family. Society, as organized at present, accepts the proposition of reforming the whole man, not part of a man. Amputation of a thief's both legs would incapacitate him from being a successful robber, but society will not accept such treatment. Asexualization of adults often leaves a troublesome amount of sexual desire, and even if it is done in childhood, there is by no means a total absence of it, though it is much lessened. Oriental people, including the Turks, have tried this treatment among the Eastern eunuch and have no confidence in it as an agency for

moral reform. The eunuchs were shameless, melancholic and often suicidal, as well as defective in courage, gentleness and remorse. Although the valleys are deep and dark, we must not dwell in an atmosphere of gloom, but must move on and up toward the greater light, realizing that with every step taken vision becomes clearer and more comprehensive, and that positions occupied to-day with safety were yesterday inaccessible. The hilltops of science are luminous, and the public sentiment of the future is destined to be more and more informed by science and will eventually adopt its suggestions in matters of statecraft and social economics.

Rape is frequently caused by diseased sexual passions. Surgeons daily remove tumors and limbs for the cure of disease. To asexualize the rapist would protect against repetition of the offense. The punishment would be none too severe. The rapist should take the radical treatment. How many rapists under sentence for five to twenty years would accept this operation as the price of freedom, would be difficult to say. If this class of criminals were given one year after sentence had been pronounced in which to accept this operation as the price of their liberty, only a small percentage of them would remain in prison.

Asexualization of defectives and criminals, both male and female. would speedily limit the dissemination of disease, vice and crime. It would remove their obliquities and transform many of them into useful and productive citizens. By eliminating their productive capacity it would diminish their numbers and permit a rise in the physical, intellectual and moral standard of the race. Owing to the innate repugnance toward this condition, as a penalty for crime, it would be a powerful deterrent and thereby diminish crime, protect against many ravages, and satisfy the vengeance of the outraged community. Ignorance, intemperance, poverty, disease and defects are symptoms indicating a social state or condition of crime and pauperism rather than the cause of them. Society maintains alive those that would perish without its aid. It is folly to permit the breeding of social gangrene.

The reproductive organs have no function in the human organism except the creation and gratification of desire and the reproduction of the species. Their loss has no effect upon the health and longevity of man. Their removal would destroy desire and diminish the wants of nature. A want removed is equivalent to a want supplied. It would be a kindness rather than an injury to abnormal persons. The operation is simple, safe and painless. It would confer upon inmates of prisons, reformatories etc., immunity from evil practices, and give them health and strength, satisfaction and comfort for discontent and insatiable desire. The prevention of reproduction should not be objectionable to this class, because idiotic, insane or criminal children are of no comfort to parents. Such surgery is as wise and merciful as vaccination or the extraction of a decayed and aching tooth.

In the Cincinnati Lancet-Clinic, Oct. 3, 1896, will be found a description of an operation invented by the writer for the cure of certain cases of insanity. The operation consists in cutting or exsecting from one-fourth to one-half inch of certain branches of the pudic nerve. This causes a suspension of the sexual activities for a period of from one to four years, with a return of same as soon as the nerves are reunited. This operation has not been in use long enough to judge of its usefulness. The sexual instinct was implanted for the propagation of the race, not for its degeneration and destruction. Humanity sins against the Creator by contributory neglect in this matter. Society arrests and confines the lepers, the victims of smallpox, yellow fever or cholera, and treats them as it sees fit. It shuts up the imbecile, the criminal and the insane for the protection of the public. No one questions its right to do so. Yet it allows the deformed and diseased in mind and body and soul to disseminate social leprosy and cancer. This could be prevented by the adoption of an operation almost as simple and painless as vaccination. It seems strange that the matter should be delayed so long. Asylums, prisons, and jails can not be built fast enough to meet the requirements of social neglect. Society is working at the wrong end of the subject. It should get at the rottenness of the root of the tree of humanity. The upper tenth in society has remained about the same for 3000 years. There used to be no submerged tenth, but today we have a largely increasing submerged tenth. There is a lack of growth at the top. Stature and health are decreasing. Weak nerves and weak stomachs are on the increase, as the result of faulty breeding. The decay of the Republic is due to the degeneracy of the people. It is an outrage that the State and Nation stand idly by and permit the intermarriage of criminals, paupers and defectives, thus becoming a party to the wholesale manufacture of probable criminals. The State has the right and power to prevent the probable from becoming the positive criminal.

History records that many cities have been built on this earth, some of them nearly as large and as rich as any of the present age, yet through internal disease they went down in ruin, and nothing but potsherds and broken brick remain to mark their former existence. It is time to put up the signboard and suggest whither we are drifting.

Let the nation adopt the plan of treatment herein suggested for one generation, and the result would be that all the inherited rottenness and corruption of ages would be purged out of the people. The criminal and pauper class would become extinct. Asylums, prisons and jails would become depopulated. The great burden of taxation would be lifed from the people. Doctor's bills would be less of a drain upon the family and chronic disease would be diminished. - Let the sword of justice cut the knot of bondage and society take control of its own destiny and regulate reproduction with the wisdom of experience, and the "ills which flesh is heir to" will vanish before the glorious dawn of the day of comfort, hope, peace and promise.

Fifth and Wilkinson streets.

BIBLIOGRAPHY.

Havelock Ellis: The Criminal.
Morrison: The Criminal.
Morrison: Female Offender, and Juvenile Offenders.
Morrison: Civilization: Cause and Cure.
Fairbanks: Introduction to Sociology.
F. M. Sprague: The Laws of Social Evolution.
Boies: Criminals and Paupers.
Reports from Elmira Reformatory.
Clouston: Mental Diseases.
Bevan-Lewis: Mental Diseases.
Tuke: Mental Diseases.
Sterns: Mental Diseases.
Sterns: Insanity; Its Causes and Prevention.
Lombroso: Insanity and Genius.

Enteralgia of Infants.

Enteralgia, or colic of infants, is most common between the first and fourth months of infantile life, and is not only a cause of great distress and fatigue to the mother, but of much pain and suffering to the infant. Usually the infant has one attack in twenty-four hours, and the attack may recur at regular periods, either in the morning or in the evening, and may vary not only in duration but in severity. The attacks are always sudden, and the infant, while apparently comfortable, will suddenly utter sharp, piercing screams, which continue for twenty minutes, or perhaps an hour, and are then interrupted by a few moments of ease, only to have all the symptoms of colic return with increased pain and distress. The efforts of the mother to soothe or calm her babe are of no avail; the babe continues to cry and scream; it will take the breast for a minute, and then quickly let it go, and will throw itself violently back upon its mother's arm, and continue its distressing and piercing cries until every one about the nursery becomes nervous, and anxious to do something to relieve the little sufferer. During a paroxysm the infant will rapidly draw up its legs and knees, then as rapidly extend them, and if the hand of the mother or nurse is placed upon the abdomen, it will be found to be swollen, hard, and knotted; and gas can be heard moving about in the intestines. Passage of this gas, either by the mouth or anus, is usually a sign for an abatement of the paroxysm. Generally the hands and feet become cold, and drops of cold perspiration break out upon the face. The bowels are sometimes constipated, but most frequently they are loose, and the evacuations present a thin and frothy appearance. The face often indicates, by its expression, the severe suffering of the babe, and is either pale or flushed. While these distressing symptoms always end without serious injury to the babe's general health, they occur and recur regularly at about the same time every day for weeks, and sometimes months; and in order to mitigate the suffering the mother or nurse usually gives the babe stimulating potions or opiates. As a rule I have regarded these attacks as pure colic, arising from altered or vitiated secretions of the intestinal canal, but cases are now and then met with which are neuralgic, and the distinction which I make between colic or enteralgia and neuralgia in infants consists in the symptoms. In infantile neuralgia of the bowels there is no escape of gas, the bowels are not distended or the secretions altered, and the abdomen is not distended with gas or flatulence.

Treatment.—Nothing affords a mother more delight than to have prescribed for her babe something that will relieve and cure these terrible attacks. If of a purely neuralgic character, these attacks can be not only cured but prevented by the administration of cinchona, or some suitable form of one of its various preparations, but when the attacks are colic or enteralgia, I rely for its cure upon a mixture of equal portions of Lactopeptine and subnitrate of bismuth. During the first month of infantile life I usually give a half grain each of Lactopeptine and subnitrate of bismuth every hour during the attacks. I direct the mother to place the powder made of this combination upon the babe's tongue every hour, and continue it whenever the child is awake until the recurrence of the colic is entirely

prevented. After the first month I give two grains each of the Lactopeptine and bismuth every hour. I commence this treatment during the attacks, and after a few doses the babe soon gets quiet and goes to sleep. I instruct the mother or nurse to persevere in the administration of these powders, and in a few days she will be rewarded by the pleasure of finding that her babe escapes the daily attacks of terrible colic.—*J. B. Johnson, M. D., of Washington, in Southern Clinic.*

Malarial Peripheral Neuritis.

Highet has recorded the results of a study of ten cases of malarial neuritis (International Medical Magazine). Intermittent fever, persisting for a long time, or remittent fever with frequent exacerbations, is followed after some months by attacks of pain in the legs and knees. These pains are worse at night, and are sometimes associated with cramp of the muscles. Later the knees feel weak and give way, the limbs become painful in the daytime as well as at night, and the pain extends to the thighs, the back and the arms. Fever persists, the pain interferes with sleep, the weakness may become paralysis, cutaneous sensibility is blunted, and paresthesia are marked. The loss of muscular power may assume a remittent character. Hemeralopia may occur. The spleen and liver are enlarged. Deep pressure over the muscles causes pain. The tissues become flabby and may atrophy. Effusion into the joints sometimes occurs. The condition of the heart is variable; at one time it is quiet, and again it is rapid, with arhythmia. Angina and tachycardia have been observed. Anemia, cardiac dilatation and hemic murmurs are noted in some cases. Occasionally there is some edema of the feet. Highet considers malarial peripheral neuritis to be a toxic affection of the nerves, the toxin being the product of the malarial germ. A single attack of fever rarely causes well-marked neuritis; the cumulative action of the poison on the nerves being required to bring about the pathological changes which give rise to the symptoms. The period of incubation extends on an average over eight months. Removal of the cause and efficient hygienic and medicinal treatment usually give good recovery. The diagnosis of the affection must, in most cases, be made from beri-beri. The principal points of difference are that in malarial peripheral neuritis we have marked anemia, mild or absent heart symptoms, enlarged spleen, neuritis preceded by fever and often associated with it, the long incubation, the remittent character, the presence of plasmodium, the shuffling gait when loss of power is marked, and the readiness of cure. In beri-beri affection of the heart is a regular feature, local edema and serous effusions occur, the onset is rapid and usually attended with fever, there is no plasmodium, the gait is equine and typical, and sudden death is common. As the diseases occur in the same regions, one must think of mixed infection.

Syphilis of the Respiratory Passages.

Dr. Francke H. Bosworth read a paper on this subject, at the N. Y. Academy of Medicine, April 7th, 1899, (Medical Record, April 15th, 1899). He said that his experience had taught him that there was practically but one syphilitic manifestation in the nose, and that was the gumma.

In the very large majority of cases it was not recognized until the gumma had broken down, and had resulted in the formation of a deep ulcer and in necrosis of the bone. It was rare to meet with necrosis of bone in the nose, aside from its association with malignant disease, except as a result of syphilis. There seemed to be no adequate explanation of the frequency with which syphilis of the nose resulted in necrosis of bone, except that the manifestations of this disease in the nose belonged to the tertiary period. Syphilis of the fauces consisted in a deposit of inflammatory material in the superficial layers. Mucous patches demanded exceedingly vigorous local treatment. The patient should be seen daily, and the patches cauterized with the solid stick of nitrate of silver until they had healed. If the outbreak occurred two or three years after the primary sore, the result was a superficial ulcer; if it occurred after six to ten years, the ulcer would be deep. This ulcer manifested a marked hesitancy in passing beyond anatomical barriers. He knew of no morbid process occurring in the air tract which resembled the manifestations of syphilis. Syphilitic ulcers of this region should be distinguished from tuberculosis and malignant disease. The term "ulcer" was very commonly used loosely and vaguely in medicine. The best definition of an ulcer that he knew of in the English language was that of Erichsen, viz.: "A solution of continuity with progressive waste of tissue." The local medication was of secondary importance as compared with the internal administration of iodide of potassium in the treatment of syphilis of the pharynx. The peculiarity of syphilis of the nose was its "explosive action"—in other words, a deposit of gummatous material, and its sudden breaking down, resulting in

ulceration and necrosis limited to the area of the original gumma. After this, the constitutional virus seemed to become quiescent for a longer or shorter time, and then a new outbreak occurred. The indication was to remove all the necrosed bone as soon as possible. A marked feature of syphilis of the pharynx was the degree of contraction occurring during the process of healing. It often seriously interfered with deglutition or respiration. This severe ulcerative process, it seemed to him, belonged essentially to the food-tract. Syphilitic ulcers of the larynx were usually limited in extent, and superficial. The usual type of laryngeal syphilis was a mild one, there being perhaps one severe case to twenty mild ones. Local treatment was of some importance, though secondary to the internal administration of remedies. The indication was promptly to arrest the local process of ulceration by the administration of iodide of potassium, and after this the long-continued use of mercurials.

Rheumatic Tonsillitis.

Abrahams (Med. Press and Cir.) read a paper on this subject at a recent meeting of the Clinical Society of London. The author said:

The material upon which this paper is based is mainly composed of cases of rheumatic tonsillitis observed by the author during the last three years. A large number of cases of chorea, rheumatism, and cardiac diseases, both in adults and children, have been investigated and tabulated, and the resulting statistics compared with those of previous observers, in order to ascertain as accurately as possible the relation of the throat affection to the rheumatism. The bacteriology of many of the cases has also been studied with a view to obtaining some light upon the etiology of the disease itself. The bulk of the work, in so far as it relates to children, was done in the out-patient department of the Evelina Hospital for Children. Dr. George Carpenter was kind enough to permit the use of the material, and also to allow the results to be compared with his own works for the last ten years. Details are given in the paper of a number of cases illustrating—(1) The occurrence of endocarditis after non-scarlatinal tonsillitis without the intervention of arthritis or chorea; (2) tonsillitis immediately followed by a first attack of chorea; (3) repeated attacks of chorea, each preceded by tonsillitis; (4) the occurrence of sore throats at various points in the rheumatic series. Clinically, five varieties of sore throat affection may be distinguished. (1) Faucial erythema, the pharyngeal inflammation described by Trousseau as ushering in an attack of acute rheumatism. (2) Follicular tonsillitis. (3) Quinsy. Between these latter no pathological distinction can be at present drawn, though it is notable that when a patient has repeated attacks, they are almost always solely of one kind or the other, an alternation being rarely observed. As is also the case with non-rheumatic forms, the follicular variety is commoner in children, the quinsy in adults. (4) The abortive form described by Singer (angine rhumatismale of French authors), in which the joint and muscle pains are vague, is not so frequent as he states. No case should be included under this head in which there is not adequate personal or family history of rheumatism. After making this observation a considerable number of instances remain, the most noteworthy point about which is their liability to die suddenly from cardiac failure. (5) Chronic rheumatic tonsillitis is described by Dr. Max Thorner: this affection is more probably gouty in nature. A stitistical inquiry was made into consecutive cases of three distinct affections, namely, 248 of chorea, 43 of acquired heart disease in children unassociated with chorea, and 66 of rheumatic fever in adults: Of the choreas in which a reliable history was attainable, 53.4 per cent. had a family or personal one of sore throat. This history was not associated with any marked predisposition to either arthritis or heart disease. Of the cardiac cases 66.8 per cent. gave a history of throat affections. Among the adults 45.5 per cent. had a definite throat history, 21.2 per cent. had suffered from ulcerated throats within three weeks of the attack of acute rheumatism, and 47.2 per cent. showed faucial erythema within two days from its onset. In children, where the commencement is insidious, faucial erythema is extremely rare. On the other hand, a large proportion of them had follicular tonsillitis when first seen, several being brought up on its account and either revealing cardiac disease when examined or developing chorea while under observation. There seems little reason to doubt that in many of these cases the tonsils may have been the channel of infection; this is, of course, by no means invariably true, as the sore throat is often a late term in the rheumatic series. Bacteriological examination of the tonsils and their exudation in a large number of cases revealed the constant presence of strepto- and staphylococci, the former more frequently, but the latter oftener in pure culture. Similar organisms were found in the urine drawn from the bladder with all antiseptic precautions.

Taking these results together with the

discovery of the same microbes in the blood and affected joints in acute rheumatism by Sahli and others, the probability of the occurrence of infection through the tonsil becomes very strong. It is believed by many that the rheumatic patient is poisoned by the attenuated virus of a germ which when fully active leads to pyemia. The following conclusions are put forward:

1. The more common varieties of rheumatic sore throat fall into two main categories—faucial erythema and tonsillitis proper.

2. Faucial erythema is most common in adults, rheumatic tonsillitis in children, in whom it usually assumes the follicular type, quinsy being more frequent in older subjects.

3. Faucial erythema is an initial manifestation of acute rheumatism; tonsillitis may be the actual primary lesion.

4. Many cases are now definitely on record in which endocarditis has followed a non-scarlatinal tonsillitis unaccompanied by joint pains. In numerous other instances the tonsillitis has immediately preceded an attack of arthritis or chorea.

5. The presence of the same micro-organisms in the tonsils, joints, blood and urine is evidence in favor of the participation of pyogenic cocci in the etiology of rheumatism.

The Diagnosis of Scarlet Fever.

The Medical Age suggest the following points in the diagnosis of this disease.

Initial vomiting, very constant in children under ten, less so above that age, and rare in measles, German measles and diphtheria.

Undue frequency of pulse—says 140 to 150—out of proportion to the other symptoms.

The rash beginning on the upper part of the chest, over the clavicles and about the flexures of the neck, often will marked on the back of the waist.

To discriminate between scarlatina and German measles, Lindsay is in the habit of relying on the following points: In scarlatina there is initial vomiting; a brief but well marked prodromal stage, with vomiting, chills, headache and sore throat, sometimes going on to ulceration; no early enlargement of the post-cervical glands. In German measles there is no vomiting, no prodromal stage, the rash being often the first symptom and always appearing on the face; little or no constitutional symptoms; no ulceration of the throat; a very characteristic early enlargement of the post-cervical glands.

Medical Society of the State of North Carolina.

Primary Announcement of the Forty-Sixth Annual Meeting, Tuesday, Wednesday, Thursday and Friday, May 30, 31, June 1 and 2, 1899.

OFFICERS AND COMMITTEES.

President—L. J. Picot, M. D., Littleton.

Vice Presidents—I. W. Faison, M. D., Charlotte; H. H. Dodson, M. D., Milton; J. W. White, M. D., Wilksboro; W. C. Brownson, M. D., Asheville.

Secretary—George W. Pressly, M. D., Charlotte.

Treasurer—G. T. Sikes, M. D., Grissom.

Orator—H. S. Lott, M. D., Salem.

Essayist—C. L. Minor, M. D., Asheville.

Leader of Debate—J. P. Munroe, M. D., Davidson.

Board of Censors—W. O. McDowell, M. D., Scotland Neck; H. H. Harris, M. D. Wake Forest; J. H. Tucker, M. D., Henderson.

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Legislative Committee—R. H. Lewis, M. D., Raleigh; G. T. Sikes, M. D., Grissom; Abner Alexander, M. D., Columbia; James McKee, M. D., Raleigh; H. A. Royster, M. D., Raleigh.

Obituary Committee—George W. Long, M. D., Graham; J. A. Reagan, M. D., Weaversville; K. P. Battle, M. D., Raleigh.

OFFICERS OF SECTIONS.

Pathology and Microscopy.—E. B. Glenn, M. D., Chairman, Asheville.

Anatomy and Surgery—Goode Cheatham, M. D., Chairman, Henderson.

Medical Jurisprudence and State Medicine—Thos. F. Costner, Chairman, Lincolnton.

Obstetrics—W. W. McKenzie, M. D., Chairman, Salisbury.

Gynecology—W. A. Graham, M. D., Chairman, Charlotte.

Practice of Medicine—Ben. K. Hays, M. D., Chairman, Oxford.

Materia Medica and Therapeutics—C. S. Mangum, M. D., Chairman, Chapel Hill.

Chemistry and Physiology—Joshua Tayloe, M. D., Chairman, Washington.

ORDER OF EXERCISES.

THURSDAY, 3 P. M., MAY 25th.

Board of Examiners meet.

TUESDAY, 10 A. M., MAY 30TH.

Society called to order by M. H. Fletcher, M. D., of Asheville, Chairman Local Committee of Arrangements. Prayer by Rev. W. M. Vines, Pastor of the First Baptist Church of Asheville.

Address of Welcome by Locke Craig, Esq.

Response by Benj. K. Hays, M. D., of Oxford.

The President takes the chair.

Roll call.

President's Annual Address.

Appointment of Committees.

Program:

WEDNESDAY, MAY 31ST.

Appointment of Committee.

11 a. m., Report of Board of Examiners.

12 m.—Conjoint Meeting with the N. C. State Board of Health.

2:30 p. m.—Election of Officers for 1900.

8:30 p. m.—Annual Oration, "The Practice of Medicine," by H. S. Lott, M. D., of Salem. Annual Essay by Chas. L. Minor, M. D., of Asheville.

THURSDAY, JUNE 1ST.

Morning—Selection of Place and time for next meeting.

Afternoon—Annual Discussion, J. P. Munroe, M. D., of Davidson, Leader, "Conservatism in Surgery."

FRIDAY, JUNE 2ND.

The Pittman Prize Essay, by the Author.

Unfinished Business.

Adjournment.

SECTIONS.

Practice of Medicine.

Chairman's Report.

Benj. K. Hays, M. D., Oxford—"The Continued Fevers of N. C."

J. Howell Way, M. D., of Waynesville,—"Pernicious Malaria."

W. L. Robinson, M. D., of Danville, Va.—"Treatment of Typhoid Fever.

James M. Parrott, M. D., of Kingston—"Hemorrhagic Fever."

J. F. Highsmith, M. D., of Fayetteville,—"Typhoid Fever, as met with in Fayetteville and surroundng country."

Jno. E. S. Davidson, M. D., of Lowesville—"Meningitis."

R. E. Zachary, M. D., of Wilmington,—"Pernicious Malarial Fever.

Wm. J, McAnally, of High Point.—"Chronic Gastro-Intestinal Catarrh."

PATHOLOGY AND MICROSCOPY.

Chairman's Report.

E. B. Glenn, M. D., of Asheville—"A Study of the Bacteriology of Specific Urenthritis."

Paul Pacquin, M. D., of Asheville—"Biology and Pathology of Mixed Infection in Tuberculosis."

OBSTETRICS.

Chairman's Report.

W. W. McKenzie, M. D., of Salisbury,—Antiseptic Midwifery."

J. W. Long, M. D., of Salisbury—"Ectopic Pregnancy."

I. W. Faison, M. D., of Charlotte—"The Management of Normal Labor."

David A. Staunton, M. D., of High Point—"The Application of Forceps in H.gh Presentations."

MEDICAL JURISPRUDENCE AND STATE MEDICINE.

Chairman's Report.

Thos. F. Costner, M. D., of Lincolnton—"Juvenile Criminals."

G. A. Ramsaur, M. D., of China Grove,—"Propagation of Typhoid Fever" and other Diseases."

Robert L. Gibbon, M. D., of Charlotte,—"Juvenile Criminals."

GYNECOLOGY.

Chairman's Report.

Wm. A. Graham, M. D., of Charlotte.

Joseph Price, M. D., of Philadelphia,—The Importance of Early Operation in Pelvic Disease."

ANATOMY AND SURGERY.

Chairman's Report.

Goode Cheatham, M. D., of Henderson,—"Asepsis and Antisepsis in Surgery."

F. T. Meriweather, M. D., of Asheville,—"Some Remarks Upon Coley's Treatment of Malignant Growths."

M. Bolton, M. D., of Rich Square—"Interesting case of Renal Calculus."

R. E. Zachary, M. D., of Wilmington,—"Chronic Ulcers of the Leg and the Different Methods of Treatment."

MATEIA MEDICA AND THERAPEUTICS.

Chairman's Report.

C. S. Mangum, M. D., of Chapil Hill, "Progress in Serium Theraphy."

E. A. Moye, M. D., of Greenville—"Acnite Poisoning. It's Diagnosis and Treatment, with Report of a Case."

J. C. Rodman, M. D., of Washington—"The Use of the Normal Salt Solution in the Treatment of Disease.

E. B. Goelet, M. D., of Saluda—"Electricity as an Aid to the Physician and Surgeon."

CHEMISTRY AND PHYSIOLOGY.

Chairman's Report.

Joshua Tayloe, M. D., of Washington.

THE PITTMAN PRIZE.

A prize of $100 will be given for the best essay on a subject pertaining to medicine. Provided, 1st, That it shows some originality on the part of the author. 2nd, That it comes up to a standard of excellence determined by the committee. 3rd, That the author write under an assumed name, that he shall place this assumed name upon the outside of a sealed envelope within which envelope is contained the real name of the author, that the envelope so arranged shall be handed into the committee along with the essay. 4th, That the contestant be a member of the State Medical Society of North Carolina. Essays may be handed to the Secretary during the meeting or sent to him at any time previous.

This prize is the gift of one who honored the Society by his life and character, the late Dr. Pittman, and it is worth striving for not only for the reward and honor, but also in memory of the giver and for the interest of the Society.

We urge this matter upon the attention of every member of the Society, and hope that we may have a number of essays for consideration by the committee.

TRANSPORTATION.

Mr. W. H. Fitzgerald, commissioner for the Associated Railways of Virginia and the Carolinas, has kindly granted the following rates:

Blacksburg, S. C.,	$4.65
Charlotte,	6.35
Danville, Va.,	9.60
Fayetteville,	11.75
Forest City,	4.50
Greensboro,	7.75
Goldsboro,	12.80
Henderson,	11.80
Hickory,	4.05
Lattimore,	5.25
Maxton,	11.75
Marion,	2.25
Mooresboro,	5.00
Durham,	9.80
Newton,	4.45
Norfolk, Va.,	18.45
Raleigh,	11.00
Rutherfordton,	4.25
Rural Hall,	9.40
Sanford,	11.00
Selma,	12.00
Shelby,	5.75
Suffolk, Va.,	17.85
Wilmington,	14.85
Winston-Salem,	8.80
Weldon,	15.20

for the round trip to Asheville and return.

Tickets will be on sale May 24th and 25th for the Board of Examiners and applicants; May 28th, 29th and 30th for the meeting of the Society. All tickets good until June 14th. Your local ticket agent can give you any other information. The above prices from junctional points; proportional rates from any point in the State.

Special rates will be given at the hotels:

Battery Park	$2.50
Berkeley	2.00
Swannanoa	1.50
Oaks	1.50

Management of Labor.

Milo B. Ward (Montreal Medical Journal) says: The most trying problem in connection with our duties as obstetricians is the one which relates and has to do with one's own person. *To keep clean.* What a herculean task!—I may say an impossible thing to do. It is our duty to make every endeavor known to science to keep our hands free from septic micro-organisms. To do this we must, so far as possible, avoid contact with known virulent infection. If we are called upon to care for a woman suffering from puerperal septicemia, we should positively refuse to attend in confinement any other woman until sufficient time has elapsed to make certain that our hands are clean. This may require three or four days, and a week would be still better. One of the ways of keeping our hands contaminated is to wear the same gloves for weeks and perhaps months. What could be more septic than a glove which is worn until it cannot be kept on the hand, when all sorts of septic conditions have been under their treatment? A word to the wise is all-sufficient. It would not seem necessary to make mention of such a trifling thing as the nails of the accoucheur, but careful investigation would develop the fact that frequently we are found attending the parturient woman with finger nails which have not been properly trimmed. There is but one way to prepare our nails, namely, cut them so close to the finger ends that there will be no possible chance for them to abrade the tender tissues or carry infection. I do not believe any good is derived from the vaginal douche as commonly used. It has been quite well established that the vaginal mucous membrane does not contain septic germs, except in rare instances. However, granting that the vagina is septic, how much good can be expected to result from a small stream of medicated water forced into the vagina with an ordinary syringe? If we are to prepare the vagina for the ordeal by any douching, we should be as thorough as though we ex-

pected to perform a colpohysterectomy. We should, therefore, either thoroughly disinfect the vagina or leave it as we find it. Quite different are the conditions of the external genitalia. Here one should be very cautious. The pubes should be thoroughly scrubbed in every case. Not only should we carefully prepare the external organs, but we should use every endeavor to keep these parts from contact with sepsis. The preparation of the patient is no more important than it is to have the envionments as ideal as circumstances will admit. It is not, then, the vagina but the external parts which should receive the most scrupulous preparation. After labor it is of paramount importance that every tear, however slight, should be immediately closed, in order to prevent absorption of sepsis and at the same time put the parts in their proper relation. It does not require any unusual skill to repair and make the vaginal outlet as good as before the injury, and it is our duty to do this for many reasons, not the least of these being the future functions of these important organs.

Boric-Acid Intoxication.

R. B. Wild (The London Lancet) distinguishes two forms of intoxication from boric acid—one in which a large quantity of the drug is rapidly absorbed from the alimentary canal, from a serous or other cavity, or from an extensive raw surface; in these cases vomiting and diarrhea, general depression, and partial paralysis of the nervous and muscular systems occur, and may cause death. A rash is noted in many instances, especially when the patient recovered or lived some days after the absorption of the drug. The other class of cases results from the administration of boric acid or borax in comparatively small doses for long periods, and the symptoms appear at a variable time after the commencement of the drug. In some of these cases it is mentioned that the kidneys were diseased, and the author gives as a possible reason for the immunity to the injurious effects of boric acid its very rapid elimination by healthy kidneys.

Furthermore, it is possible that cases of intoxication occur more frequently than is at present recognized. Boric acid may unwittingly be taken in food and cause a toxic skin-eruption which may be mistaken for eczema, psoriasis, or exfoliative dermatitis. It may be noted that a 1:500 solution corresponds to 17.5 grn. per pint of the acid, a very large dose for an infant on milk diet and one likely in some cases to produce disturbance of the alimentary canal. It should also be ascertained that the milk ordered in cases of kidney disease is free from excess of boric acid or borax. The use of boric acid or the borates in surgery and their internal administration ought to be carefully guarded in patients with diseased kidneys, and immediately discontinued on the appearance of dermatitis or other toxic symptoms. In suspected cases examination of the urine may afford valuable evidence of the presence of the drug.

Lactation During Pregnancy.

Dr. Capart has recently written a thesis upon this subject and says that the literature upon this subject is relatively small. (Obstetrics, April, 1899). Poirier, who published his researches in 1890, says that in the great majority of cases children who nurse from mothers who are again pregnant do not suffer in any way.

In veterinary practice breeders attempt to improve their stock for various purposes by having the females covered during lactation.

Examination of human milk secreted during pregnancy shows no material change as compared with ordinary breast milk. In only two of twenty-nine cases was the amount of milk somewhat reduced.

As for the nurslings who have nursed mothers, Capart did not find the slightest evidence of rickets nor of gastro-intestinal troubles, which lead to emaciation.

Capart concludes that pregnancy is not incompatible with lactation, and that neither the nursling nor the pregnant mother, nor the child in course of development, has ever been known to suffer from this coincidence; and that in all cases where weaning ought to be postponed, the nursling has everything to gain by being permitted to continue to nurse the pregnant mother.

Quinine in Malaria.

H. A. Hare (Medical Record). So far as the infecting organism is concerned, quinine acts as a specific. He says that quinine sometimes produces hematuria in malarial disease; malarial disease often congests, irritates, or inflames the kidney; quinine is capable of doing likewise.

He does not, however, advise that no quinine be given in malarial nephritis or hematuria, but that it be given wisely. Its administration during an attack of hematuria is equivalent to "shutting the door after the horse is stolen." In hemoglobinuria occurring with the paroxysm there is probably less danger than when true hematuria is present, since the kidneys are not so clogged by blood-clots. In a prolonged hemoglobinuric attack, indicating that the

malarial poison is destroying the blood-corpuscles independent of the chills, quinine may be needed. If given, cholagogues, followed by a brisk purge, should be used to aid in eliminating the coloring-matter through the liver and bowels, and to relieve the kidneys. When through the frequency of the intermittent paroxysms quinine must be administered, the same attention to the bowels should be given and the kidneys flushed with diuretics, as the vegetable potassium salts. In cases of severe hematuria associated with jaundice and general hemorrhages from the stomach, bowels, and nose, the virulence of the infection calls for quinine, though the contraindications are stronger than ever. This malignant form comes on either suddenly with the access of a malarial attack in a patient already broken down or as an attack of hematuric jaundice, without any evidence of another dose of malarial poison. Quinine will be needed in the first of these, but not in the second, which should be treated by other measures for relief of the dyscrasia and hematuria.

Medical Journals Consolidated.

In view of the large number of medical journals appealing for aid and support it has been deemed expedient to consolidate the two most influential medical journals of Kansas City, viz: The Kansas City Medical Index and The Kansas City Lancet, under one management. By this arrangement Dr. John Punton becomes Editor-in-Chief and associated with him are twelve well known physicians and surgeons of Kansas City.

In future all correspondence, exchanges, etc., intended for these consolidated journals should be sent to the Editor, 600 Altman Building, Kansas City, Mo.

Writers' Cramp.

Editors Charlotte Medical Journal:

Sirs:—The remarks of Dr. Monell on the radical cure of writers' cramp, in the April number of the Journal, recalls a case occurring in this city, the cure of which presented at least some novel features. The gentleman affected was a book-keeper, and at times very seriously annoyed by the condition known as writers' cramp. He had been the rounds of nearly all of the doctors seeking relief, and had had all kinds of things done for him—rest, massage, electricity, drugs—and all without avail. One day, a little over a year ago, he met with a slight accident in which the end of the index finger was mashed. From the day of the injury to this he has never been troubled any more with writers' cramp. I will not undertake to explain the process of cure in this case. Whether the intense stimulation of the peripheral terminations of the nerve by the bruising of the finger may have caused trophic changes to take place in the nutrition of the nerve, or in its motor conducting power, I do not know; and while the cure may be a novel one, it would hardly be a pleasing process to suggest to most sufferers from this aggravating condition. The case is interesting, however, from its obstinacy under all measures and from its relief in this wholly unlooked for manner.

Wm. Edgar Darnall.

Atlantic City, N. J., April 24, 1899.

Enlargement of the Lingual Tonsil as the Cause of Cough.

B. Robinson, before the American Laryngological Association, referred to enlargement of the lingual tonsil as a cause of cough being poorly understood by the general practitioner. (Boston Medical and Surgical Journal).

The beginning of this condition is insidious, especially in young adults. Those of a sluggish, or lymphatic temperament are more subject to it. If the cough lasts but a short time the general practitioner usually ascribes it to the stomach or reflex cause. Possibly he may think of laryngeal inflammation, and the larnygeal mirror may reveal an enlarged tonsil. In children of from two to three years of age a laryngeal cough, without resasonable cause is usually due to pressure on an enlarged tonsil. An irritative cough is often the only symptom of acute congestion of the lingual tonsil; there is little to be found on inspection. All the systoms are worse at night. Impaired condition of the general health or the continuance of a catarrhal relexation are the predisposing causes. The trouble may be also due to anemia, constipation, habitually irregular habits as regards food and rest, as also overfeeding and indulgence in pastry in young children.

The Tennessee State Medical Society elected the following officers at Nashville, April 11–13, 1899:

President—Dr. D. E. Nelson, of Chattanooga; Vice-President for East Tennessee—Dr. G. M. Bezemore, of Cleveland; Vice-President for Middle Tennessee—Dr. G.W. Moody, Shelbyville; Vice-President for West Tennessee—Dr. M. M. Smith, Cedar Chapel; Treasurer—W. C. Bilbro, Murfreesboro; Secretary—U. D. Haggard, 812 N. High, Nashville.

A Contribution to the Crede Silver Method of Wound Treatment.

Dr. Paul Meyer, (Deutsche Militararztliche Zeitschrift, No. 1, Berlin, January, 1899).

Practical experimentation with the Crede Silver Method has been made for about a year past at the Naval Hospital at Wilhelmshaven. I have employed the Citrate of Silver Crede as a dusting powder; the Argentum Solubile Crede in 0.5 : 200.0 solutions ($7\frac{1}{2}$ grains to $6\frac{1}{2}$ ozs.) with 2.0 (30 grains) of albumin for internal use; the Lactate of Silver Crede in solutions of 1 : 2000 for irrigations; the Unguentum Crede; Citrate of Silver suppositories, 2 per cent., and Silver Silk, Silver Catgut, and Silver Gauze.

In the absence of personal experience with the method, I at first followed Crede's directions with exactitude. The usual preparatory methods with hot water and soap, shaving, green soap tincture, alcohol and benzine were employed. Wounds were irrigated first with water, and then with the Lactate of Silver solution. The powdered Citrate was employed as a dry or moist dressing; the Citrate of Silver suppositories were used for the orifices of wounds; and for spreading inflammatory conditions or general infection the Silver Salve was employed by inunction, or, more rarely, Soluble Silver was administered internally

The following operative procedures healed per primam: One radical hydrocele operation; one hydrocele puncture; seven removals of great toe nails for ingrowing toe nails; five phymosis operations; one paraphymosis operation; one removal of a hazelnut-sized pedunculated fibroma from the rectum with the thermo-cautery; one enucleation of a cherry-sized sebaceous cyst from the temple, one of an egg-sized cystic tumor from the capsule of the knee joint, one of an egg-sized fibro-myoma of the thigh under the fascia lata, and one of a walnut-sized hard indurated lymphatic gland from the neck; one removal of a potato-sized pedunculated exostosis from the lower third of the femur, and one of a smaller exostosis from the left calcaneus; one exarticulation of the right little finger at metacarpo-phalangeal joint; one amputation of the left ring finger at its middle; one removal of a splinter of glass 5 cm. (2 inches) long, seated for 8 years on the tibia; and one transplantation on an ulcerated surface the size of a hand on the right knee.

In the following cases an abundant serous secretion lengthened the time of healing: One removal of an egg-sized sarcomatous lymphatic tumor from the right side of the neck, with massive non-purulent secretion during the first two weeks, the tissues having been greatly damaged during the operation, and the sutures cutting their way out through the separated edges of the wound; one removal of a walnut-sized cystic goiter, with a similar result after four weeks; one exarticulation of the left index finger at the metacarpo-phalangeal joint, with a similar result after fourteen days, and an irritation eczema appeared in the neighborhood of the wound; one external urethrotomy, with urinary infiltration and cutting out of the perineal sutures, but with little irritation of the surrounding tissues and healthy granulations promising a good final cicatrization; one skin transplantation on an ulceration of the left leg half the size of one's hand, with adhesion of the transplanted skin, but abundant serous secretion and exuberant granulation of the surrounding areas.

Pronounced suppuration occurred in the following cases: One paraphymosis operation with suppurative extrusion of a gangrenous portion of mucous membrane at the site of constriction; one removal of a walnut-sized cystic goiter, where the ligatured stump suppurated for twenty days.

Most of the foregoing cases went on to undisturbed primary healing, though the wounds were in many cases in situations very liable to become contaminated. The absence of irritative effects was very noticeable, even in cases where the tissues were soaked with urine for weeks.

The following injuries healed per primam: One punctured wound of the back with a pocket knife through the clothes, and a similar one in a very dirty palm; one contused wound of a dirty index finger, one behind the ear from a blow with a beer bottle, another of two dirty fingers in a machine, and another of the head with splintering of the bone; one incised wound of the little finger made with a bread knife; one complicated fracture; one incised wound of the upper arm with division of three tendons.

Abundant serous secretion appeared in the following cases: One burn of the third degree of almost the whole hand, in which other treatment had to be employed on account of disintegration of the tissues; one contused wound of the index finger, with secretion for seventeen days; one punctured wound of the shoulder with much hæmorrhage and nine days' serous secretion.

The following injuries suppurated: Punctured wound of the temple and injury to a vessel of the dura, with suppuration

for several weeks after trepanning and extrusion of a necrotic portion of the external table; one incised wound of the lower arm in an attempt at suicide, with division and necrosis of two tendons; one contused wound of the index finger, with gangrene; one contused wound of the middle finger, with the same result; one complicated dislocation of the left distal thumb joint, with infection.

In most of these wounds the silver disinfection was satisfactory; the inflammatory symptoms retrogressed and became localized. In nine panaritiums suppuration ceased with the extrusion of the necrotic bone two to thirteen days after the incision. The granulations were good and functions were retained.

In five cases of suppurating lymphatic glands of the neck, the axilla and the groin, healing per primam took place twice; in the other three cases the separation of necrotic gland tissue caused suppurations lasting from four to fourteen days.

Twenty cases of cellulitis, most beginning in the hand, were incised and the lesion remained localized under the silver treatment. The same is true of nine cases of furuncle.

In one case of chronic leg ulcer the serous secretion interferred with the healing; another one was cured in seven days under the treatment, after having been handled by other methods for four weeks without result.

In two cases of tubercular disease of the lumbar vertebræ and ribs the silver treatment did no good. Both did better under iodoform.

As regards general infection, only one pronounced case of septicæmic nature was treated. The patient was an officer, forty years old, corpulent, with a fattily degenerated heart, and was admitted at 11 A. M., in a stuporous condition and with high fever. Infection had taken place from a small wound of the finger, and the whole forearm was swollen and doughy. The flexor muscles of the forearm were incised under Schleich's anæthesia; no pus was found, but the muscle bundles were soft and discolored. At half-past eleven of that morning an inunction of 4 grams (1 drachm) of the Silver Salve was administered; crisis occurred with sweating between 5 and 6 P. M.; the temperature fell from 39.2 deg. C. (102.6 deg. F) to 38.7 deg. C. (101.7 deg. F.), and at 10 P. M., it was 38.0 deg. C. (100.4 deg. F.) The dyspnœa got better, the heart stronger, the sensorium cleared, the general condition became satisfactory, and the outlook very hopeful. At 11 o'clock the patient asked for water; after he had drank it he fell back dead of cardiac paralysis. In this case there was an energetic reaction to the silver, and I am convinced that with a more resistant heart the outcome would have been a happier one.

A second case of a wound of the foot with beginning general infection in a strong young man reacted very plainly to a silver inunction, as was shown by retrogression of the fever and a very noticeable improvement in his subjective condition.

In the various cellulites the temperatures fell after the inunctions; but the inflammations did not extend further than the nearest lymphatic vessels and glands, the subjective condition was unaffected, and general infections could hardly be present. The course of the affections was the same as after the usual incisions and antiseptics.

The conclusions to be drawn from the above cases may be stated as follows:

The course of wounds under the silver treatment is in general similar to that under the usual aseptic and antiseptic procedures. But it possesses two important advantages. *Rapid and reliable healing can be obtained without asepticism and with less rigorous antiseptic measures, and thus with simpler means and less trouble.* Hence it is especially suitable for the sick bays of ships, for use in the field, and for hospitals where the facilities for aseptic wound treatment are deficient and suppurative affections and fresh wounds have to be handled in the same room or very hurriedly, or with inexperienced assistants. As far as my material permit me to judge, I have found Crede's statement to be correct; I consider his method an efficacious and handy one.

The second advantage is *the marked tendency of the method to effect the localization of inflammatory processes*, as Crede claims. In most cases the inflammation of the tissues surrounding the lesion subsided in the shortest time. And even when it progressed along the lymphatics a general infection was prevented.

Poisoning by the metal, or any special pain from its use was not noticed; eczemas did occur. The course of healing was not noticeably shortened; and primary union took about the same time as with aseptic treatment. Necrotic tissue when present was cast off with a non-irritating suppuration before actual union began. The cases of general infection and of burns were too few to permit of a definite judgment; but a favorable reaction of the system to the inunctions was readily recognizable. Granulations under the citrate were almost always remarkable for their vivid color and vigorous growth.

The abundant serous secretion from the tissues was apparently a disadvantage in the cases where a primary union was desired; but whether this was dependent upon the citrate itself or upon other circumstances I cannot decide.

The cost of the silver treatment I did not find to exceed that of other methods. The Citrate of Silver is dearer than iodoform; but it is used in very much smaller quantity, as a very thinly dusted-on covering. The Silver Gauze is too expensive for universal use; but I believe that common gauze with citrate will do just as well. The price of ointment is of no importance, on account of the small quantities that are employed.

The following is the method that I now employ for ambulant patients, in view of the very reliable anti-inflammatory and localizing properties of the Crede Silver preparations:

Injuries and inflammatory processes are treated with silver until all traces of inflammation have disappeared, and until healing by adhesion and granulation formation has begun in the depths of the wound. Cicatrization may be promoted by cauterizations and salves. Operative wounds in which primary union is not absolutely necessary are treated with silver if it does not appear that the abundant serous secretion interferes with the healing. For febrile symptoms I employ the salve by inunction; more rarely I administer the silver internally.

In conclusion I may state that the silver treatment, whilst not equal to the aseptic treatment of wounds, is reliable where the latter cannot be carried out; as in non-aseptic hospital operating rooms, in dressing rooms, in ship bays, in private practice, and especially in the field. In the latter case the removal of the first dressing need not be a matter of such anxiety as it now is, even if it is soaked with secretion from the wound. For it is proven that the bacteria cannot develop in secretion impregnated with silver.

My experience leads me to place the fullest reliance upon the silver treatment of wounds, and I can recommend it in every respect in the most emphatic manner.

The Postpartum Douche.

In this case we did not swing with the pendulum. The following, which is taken from the Physician and Surgeon, is in line with our views:

It is interesting to watch the swing of the pendulum of opinion in any department of science or art. From the midpoint, where its motion scarcely attracts attention, it proceeds to the extremity of ostentation and dogmatism only to return again into obscurity of moderation. Such has been the history of the postpartum douche and other antiseptic frills of the lying-in chamber. We are all quite familiar with the precise rules of practice only recently proclaimed as it were from every housetop, and now, when they have been learned, are cautioned lest we too zealously observe them. According to the *Philadelphia Polyclinic* the postpartum douche has already been discarded even in the outpatient obstetric service of the Polyclinic. Their treatment, following which they report no occurrence of septic infection, is as follows: The patient's body is thoroughly cleansed before she is put to bed. A vaginal douche of lysol or creolin is then given. After labor the patient is again cleansed but no douche is administered. This practice, thé result of both theory and art, corresponds, we doubt not, with that now most generally in vogue. Labor is the culmination of a physiological act and is itself a physiological occurrence. Unless it be as a result of meddlesome artifice there is no apparent reason why a normal process under normal conditions should be made laborious and uncomfortable as has sometimes been the case.

Cystitis and Urine Infection.

Max Melchor (New York Medical Record). Every cystitis is due to microbes, with the exception of rare poisoning with chemical substances.

In general we find in the urine of cystitis a pure culture of a single species, generally in large amounts.

The bacillus which is found most frequently in cystitis is identical with a very common intestinal parasite, the bacterium coli commune; it is pyogenic and infectious and of varying virulence.

In the urethra, the male prepuce, and the vagina pathogenic bacteria are frequently found—bacteria which when conveyed into the urinary bladder can give rise to cystitis.

The microbe itself does not give rise to cystitis; still there is a bacterium—proteus of Hauser, which by simply entering the urinary bladder may give rise to a cystitis.

The microbes can produce a cystitis only when the urinary bladder, on account of the influence of various predisposing circumstances, especially retention or trauma, is made susceptible to the infection.

Retention of urine, as well as trauma pure and simple, is incapable of producing a cystitis. The microbe is always the deciding cause.

The varying nature of the cystitis depends upon pre-existing lesions and upon the character of the substrata in connection with the various peculiarities of the bacterium, among which the virulence must be rendered prominent.

In every cystitis the urine contains pus cells, but in varying amount; the existence of the catarrhal cystitis is to be looked upon as doubtful. Even non-pyogenic microbes may cause a suppuration of the urinary bladder.

The ammonuria may be a necessary condition for the occurrence of a cystitis; most frequently, however, it is but a subordinate phenomenon which appears in the course of cystitis or remains away altogether. The majority of cases are acid.

Besides tubercle bacilli, an acid cystitis may depend upon the bacterium coli commune, the streptococcus pyogenes, and on rare micro-organisms (gonococcus of Neisser, bacillus typhi abdominalis). If the sterile urine does not produce any culture upon the ordinary media, the great probability is that a tuberculous cystitis exists.

There exists a real gonorrheal cystitis, caused by the gonococcus of Neisser.

The urinary fever is partly due to transmission of the urinary microbes into the blood, partly—and certainly more frequently—to an absorption of the soluble toxins which occur in the urine.

To prevent a cystitis, we must not only be certain of a thorough asepsis of the urethal orifice, but we must also irrigate the uretha with boric acid solution.

In the local treatment of cystitis nitrate of silver is the sovereign remedy,

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Injections of Carbolic Acid in the Treatment of Tetanus.

Ascoli (British Medical Journal). Of forty-seven cases treated with Tizzoni's serum, ten died, and of thirty-three treated with Behring's serum thirteen died. After a full consideration of the results obtained by serum-therapy in tetanus, Ascoli sums up his conclusions as follows: (1) Statistics show better results from the carbolic acid than from the use of serum. (2) The carbolic acid must be given hypodermically and in large doses. (3) Under its influence the muscular contractions and spasms diminish in a marked degree. (4) The acid acts in tetanus particularly as an antitoxic and a moderator of the reflex activity of the nerve centres. (5) The energetic local disinfection, combined with the support of the patient's strength, are the cardinal points in the treatment of tetanus. (6) Serum treatment is useful as a preventive and also in the developed disease when it is possible to apply it early or when the production of toxins is still going on. But the results of this method, if they cannot be ignored, are neither convincing nor brilliant. Even if it were the most efficacious method, symptomatic treatment must not be neglected. (7) A patient suffering from tetanus must be treated eclectically, regard being had to the wound, to the intensity of the intoxication and its duration, and to the special conditions present in the case. The injections cause no inconvenience. The dose is three to four centigrammes of a 2 to 3 per cent. solution, several times in the twenty-four hours. In certain cases a daily amount of thirty-five centigrammes has been administered without any sign of intolerance being manifested.

Period of Isolation of School-Children for Contagious Diseases.

The Medical Council of the Russian Empire has established the following periods of time for the isolation of school-children who have been exposed to an infectious disease or have themselves suffered from such a disease:

Scarlatina.—After exposure, and without development of symptoms, an isolation of from twelve to fourteen days is required. A child that has been ill may be allowed to return to school six weeks after the appearance of the eruption, provided there is after a time no trace of desquamation.

Measles.—Fifteen days after exposure; or, in case the disease has been present, four weeks from the beginning of the eruption, if there is no trace of desquamation.

Rubella.—Sixteen days; or after two weeks from the beginning of the eruption.

Varicella.—Seventeen days; or after the fall of the crusts.

Pertussis.—Fifteen days to twenty days; or after six weeks from the beginning of the cough, if kinks have ceased, and there is no expectoration.

Mumps.—Twenty-two days; or after three weeks from the beginning of the parotid swelling.

Diphtheria.—Seventeen days; or three weeks after recovery, and after the disappearance of hyperemia of the pharynx, larynx, and nose; if bacteriological examination is possible, only after the disapearance of the bacilli.

Variola.—Fourteen days; or after the fall of the crusts.

All convalescent patients should receive two or three warm bath at 35 deg. C.

A Case of Salpingitis, Ulcerative Endometritis and Proctitis, Issuing in Ovarian Abscess.

Miss L———R———, Crotona, N. Y.; admitted November 25, 1897. Patient was brought to the hospital in extremity with left salpingitis and ulcerative endometritis; greatly debilitated from the influence of opiates employed during two months previous for relief of pain, and having been blistered and rubbed, and douched and drugged to a condition little short of nervous prostration. Examination per vaginam revealed a uterus much enlarged, retroflexed, tender and giving out a profuse muco-purulent discharge. On the left side, the ovary could be felt much enlarged, soft, and prolapsed. From this examination began to fear that laparotomy would be necessary, and so advised the patient. This she firmly refused, declaring that she would rather die than be unsexed. Consequently, I could only do the best thing for her: merely a thorough curettement and treatment of the womb, with tamponing of the prolapsed ovary. On account of the patient's prostrated condition, however, this was delayed, not deeming it advisable to proceed surgically until the system could be properly built up. After her bowels had been thoroughly regulated, and stomach washed out, she was put on a teaspoonful of bovinine every three hours, in old port wine and milk alternately, with a light general diet, and so continued to December 6th, when the curettement was performed, the womb was antiseptically cleansed by the bovinine-peroxide reaction so often described, with Thiersch irrigation, and packed with gause saturated with iodoform-bovinine. This treatment was immediately followed by the entire cessation of pain that usually results from the application of the blood treatment, and also by a return to almost normal temperature. The bovinine-peroxide depuration, Thiersch irrigation, and iodoform-bovinine packing, were repeated daily, until in ten days the womb was in a healthy condition. But digital examination revealed the ovary still abnormally enlarged, soft, and very sensitive. In the erect posture, pain became extremely severe, but diminished on lying down. It seemed clear that the organ could not be saved, unless some novel way of reaching it with topical treatment could be devised that might possibly be successful; but being reluctant to experiment in this new field, I again strongly advised removal. The patient again positively refused at all hazards to have any such operation performed. Meanwhile the condition of the ovary, with severe elevations of temperature, caused hours of intense effort and anxiety to avert a sudden catastrophe. So the case see-sawed between intervals of danger and relief, with great and increasing pain, until by January 26th the condition of the ovary become so serious that a rupture of abscess into the peritoneal cavity was hourly imminent; while nothing in the line of precedent could be done to save the patient, owing to her determined rejection of operation. As a last effort, I now told the patient that I could take no further responsibility in her case unless she would submit it to my control. Nevertheless, she stubbornly refused to allow her ovary to be removed. I then consulted with her father on a compromise course which would test the practicability of topical treatment for healing. This was, to do a laparatomy for the purpose of bringing the ovary to the surface of the abdominal wound, where it could be drained, depurated with the bovinine-peroxide reaction, and topically nourished with the bovinine blood. This was agreed to, and on the 27th, under A. C. E. mixture, laparotomy was performed. The ovary was found thoroughly diseased and filled with pus, as expected. The broad ligament, however, was in a normal condition except considerable hyperæmia.

The ovary was now brought forward and stitched to the abdominal wound, incised, drained, scoured of septic matter by peroxide-on-bovinine washed out with iodoform-bovinine gauze. The surrounding tissues were protected with iodoform gauze, and the wound was covered with a wet Thiersch dressing. This procedure was repeated every day to February 9th, when no further evidence of pus could be perceived, and the ovary had taken on a healthy appearance. Meanwhile, I had made a plaster cast of a funnel shape, or hollow cone, the large end of which was applied to cover and protect the wound of the ovary, and a strip of gauze saturated with bovinine was passed into the small end, excluding air, yet so that the liquid should drip into the wound. As often as necessary, more bovinine was poured on the gauze to keep up the dripping blood supply. At suitable intervals, the cone was removed and the cleansing of the wound was repeated. This alternate cleansing and feeding was constantly continued until March 2d, when the ovary was entirely filled out with new normal tissue, and practically restored to health.

March 3d, the edges of the abdominal wound were freshened; the ovary was released from its attachment thereto, and

dropped into its place; the wound was closed with continuous silk sutures, and dressed. March 14th, the wound was entirely healed. The patient was of course still weak; but considering all she had gone through, the sustentation of her system by the internal blood supply continued all through, was a wonder for any who have not become accustomed to witnessing it. From February 1st, the dose had been a wineglassful every three hours. From now on, she picked up rapidly, and on March 31st, having adjusted a proper abdominal support, I allowed her to leave her bed. April 1st, she took a little walk out of doors, and came back feeling well. April 5th, she had a drive of an hour, without inconvenience.

On the 11th of April, this case was discharged absolutely well, a "new woman," and a *whole* woman; six and a half pounds heavier than she had ever been in her life.

THE PROCTITIS ULCERATIONS.

Complicating the case there had been a severe ulcerative proctitis of four years standing. This case had been under treatment at five different New York hospitals and in the hands of five private physicians besides, but no positive results were obtained, beyond a partial relief from pain for short periods only. After properly washing out the bowels, under a. c. c. mixture a thorough examination of rectum was made. It was tremendously congested, with about twenty points of ulceration, scattered irregularly; the largest on the posterior wall. Anteriorly, one point had almost penetrated into the vagina; the mucous membrane of the vagina being the only part of the dividing wall intact. The sphincters were very tight. Treatment: After thoroughly dilating the sphincters, the retum was depurated with bovinine-peroxide reaction and Thiersch irrigation. The points of ulceration, with the exception of the one in the anterior wall between the rectum and vagina, were touched up with the small point of a Paquelin cautery. My reason for using the Paquelin cautery in this case, instead of pyrozone or nitrate of silver, was that as the edges of ulcers were hard, hypertrophied masses, with no absorptive property, their destruction was necessary to prepare proper surfaces for the reception of the healing blood. The anterior ulcer, after being gently but thoroughly scraped, and its edges freshened, these were brought in opposition by a continuous catgut suture. The rectum was now washed out again with Thiersch and gently with gauze saturated with iodoform bovinine. This was removed, and the retum cleansed as before, and a large gelatin capsule filled with bovinine, pure, was inserted three times daily and the rectum depurated every morning as at first, for one week. At the end of this time, the ulcers, laterally, and the one sewn up anteriorly, had entirely healed. Posteriorly, they had been reduced to about one-half their original size, and presented healthy granulating surfaces. The bovinine-gelatin capsules were now inserted night and morning, with morning cleansing as before. At the end of sixteen days from the beginning of the treatment, the ulcers were found entirely healed, and the rectum in its normal condition.

North Carolina Board of Health,

The following complimentary notice is taken from the Sanitarian of New York:

No narrow idea of its field of work is entertained by the State Board of Health in North Carolina. It does not confine itself to building legal cordons around plague spots, or to giving good advice in health bulletins which nobody reads, but it uses a large portion of its annual appropriation in direct teaching of the people. Possibly local conditions of a large proportion of illiterate negro inhabitants suggested the plan, but it is undoubtedly a good one. "Health conferences with the people," as the board calls them, are held frequently in different parts of the State. All in the vicinity are invited to attend, and special efforts are made to secure the presence of the women, who are regarded as the health officers of the family. At these conferences papers, adapted in language to the hearers, are read on questions of disease and sanitation. Unclean premises, impure water, germ-laden milk, and the simple principles of physiology and hygiene are discussed before these audiences by the best physicians of the State.

As an antidote to the toxic effects of corrosive sublimate albumen in the form of egg white is most efficient, an insoluble precipitate being formed. The albuminate of mercury combined in the form of a neutral soap known as Sapodermin, forms a powerful antiseptic and germcide which is not only not poisonous, but absolutely soluble as well, and not-irritant. It does not corrode metals. It possesses unusual penetrating power and renders excellent service in all parasitic skin diseases. It is commended for general use by the physician, and is a reliable safe-guard against infection in making physical examinations. Mercurialization seems not to follow even its continuous and prolonged use.

Chancre of the Tonsil.

Dieulafoy, according to the New York Medical Journal, states that chancre of the tonsil is of frequent occurrence, polymorphous in character, and indued with manifold aspects; it is sometimes accompanied by herpes. At times it stimulates acute amygdalitis. The analogy between chancre of the tonsil and acute amygdalitis is all the greater from the fact that the symptoms are nearly identical. Sore throat even to the extent of accentuated dysphagia, rigors, fever, and extreme lassitude are symptoms common to both diseases. Whatever be the appearance of chancre of the tonsil, whether it presents the appearance of a large follicular amygdalitis, is erosive, ulcerative, vegetating diphtheroid, whether it is accompanied or not by rigors, fever, malaise, etc., symptoms not noticed as occurring in chancres of other regions, there are three signs which justify a diagnosis of chancre of the tonsil. These three signs are: (*a*) the unilateral nature of the lesion; (*b*) the induration of the tonsil; and (*c*) the presence of the characteristic glandular induration. In face of a leison of the tonsil which appears suspicious—eroded excrescent, or ulcerated—in face of an acute amygdalitis whose characters are any way unusual, we should always think of a syphilitic chancre of the tonsil if we wish to avoid a serious error of diagnosis. The diagnosis is definitely confirmed by the appearance of the roseola and mucous syphilides.

The Action of Diphtheria Toxin on the Nervous System.

Luisada and D. Pacchinoi (Medical Monograph) report the results of a number of experiments on dogs with the diphtheria toxin. Their results are substantially as follows:

The diphtheria toxins applied directly to the nervous system provoke a profound lesion at the point of application, characterized by an inflammatory and degenerative action.

These lesions are propagated more or less extensively from the point of application.

In non-immunized dogs, which had been injected by a dose sufficiently toxic, the phenomena of local reaction were noted.

In immunized dogs the toxins constantly produced alterations in the central nervous system, intense, localized, but of less extent than those produced in dogs non-immunized.

The toxin applied directly to the medulla is propagated rapidly in all directions, preferring the posterior columns, the gray matter, and the central canal, as routes. In consequence of the bulbar invasion, death occurred in the animals more rapidly when the toxins were introduced into the medulla than when applied to any other portion of the cerebro-spinal axis. When the toxins were introduced into the cerebral cortex, characteristic leisons of these regions were manifested. Death occurred later, through propagation of the poison to the medulla.

Toxins introduced into the sheath of the sciatic nerve provoked an inflammatory process more or less intense, but more circumscribed than in the central nervous system. From the nerves the poison ascended to the medulla, chiefly through the posterior columns, and thus provoked an ascending myelitis.

The leisons produced upon the neuroglia by the direct action of the toxins are similar to those reported by Vassale, Donaggio, and others in the various intoxications and infective processes. In the oblongato the prevalent alterations are found in the pyramidal tracts and posterior columns.

The alterations produced by the toxins affect the nerve-fibres more than anyother part of the nervous tissue. These lesions affect principally the myelin, and consist of a physical modification of it whereby the connections between the various nerves are lost. There is partially a chemical modification of the myelin also present.

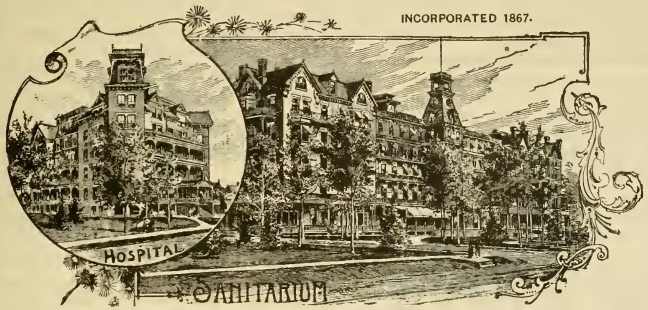
The local action of the toxins has much importance in the genesis of various paralyses as seen in the human family, attacking first the sheaths of the nerves, then the nerves, and then, later, the nerve centers of the medulla.

Picric Acid Dressing of the Umbilical Cord.

Rochon (Canada Medical Record) points out that three kinds of dressing are applied to the umbilical cord, the oily, the moist and the dry. To the first he object that it is imperfectly antiseptic, and is opposed to the keratogenic transformation of the young epidermic elements; the second (moist) method is sufficiently antiseptic, but it delays the fall of the cord, and often leaves an imperfect cicatrix; while the third (dry), by the rapid desiccation of the cord which it causes, produces the danger of premature separation and hæmorrhage. To meet these objections Rochon proposes the use of picric acid in solution. The cord is surrounded by a piece of absorbent cotton soaked in a 1 to 200 solution of picric acid. Thus the decomposition of the cord is prevented and cicatrisation of the umbilicus is aided. A single dressing may suffice, but it is best to repeat it on the second or third day.

THE SANITARIUM, BATTLE CREEK, MICH.

INCORPORATED 1867.



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Large fan for winter and summer ventilation. Absolutely devoid of usual hospital odors. Delightful surroundings. Lakeside resort. Pleasure grounds, steamers, sailboats, etc. Trained nurses of either sex furnished at reasonable rates.

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℞ NUT-GLUTEN BISCUIT: Made from the purest wheat gluten and nut meal. The only food on the market to-day that diabetics may eat of freely, without danger. Prescribed and endorsed by the physicians of the Battle Creek Sanitarium. Samples free to physicians when card is enclosed with the request. Others may have them for two 2c stamps.

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The Cause and Cure of Hiccough.

Hiccough usually attacks persons of nervous temperament, and young children who have overloaded the stomach; it may also be induced by eating foods which have been too highly seasoned. A variety of means have been suggested to stop hiccough among the most efficacious being the following:

It is recommended to distract the attention of the persons who are seized with the paroxysm; they are advised to count the flies on the ceiling, &c.; sometimes an attempt is made to frighten them, or to surprise them, and if this is successful the hiccough is stopped. Another of the means adopted is to hold the breath, either by counting up to thirty or by repeating loudly and with volubility the same sentence; or what is much better, in drinking a glass of cold water in little sips, at the same time pinching the nostrils. A good thing is to provoke a sneezing fit, either by tickling the inside of the nose, or by the aid of snuff; if a sneeze is induced the hiccough is at once arrested. The most useful remedy to employ, and perhaps the most inoffensive and the best, consists in sucking a piece of sugar which has previously been steeped in vinegar or drinking a spoonful of good vinegar in which some sugar has been dissolved. If this is not at once successful, a second spoonful is certain to be so.

Tuberculosis in the Colored Race.

J. A. Faison, (Medical Record, March 11, 1899), says:

The antecedent tuberculous diathesis is not so characteristic as in the Caucasian.

The susceptible period for the negro is from eighteen to twenty-five years of age.

Tuberculous lymphadenitis in children and young adults is not increasing in equal ratio with phthisis pulmonalis.

The dark members of the race are as liable to tuberculosis as mulattoes.

Phthisis runs a more rapid course in the negro than in the Caucasian, conditions being similar.

Hereditary predisposition does not play so important a part with the negro as with whites.

Scrofula following the law of atavism has not been observed.

Familiar Clinical Picture.

One of the most common class of cases is that in which there are no well defined characteristic symptoms of organic disease, but in which there are disturbances of practically all the functions of the body. This condition is variously termed general debility, malnutrition, general atony, etc. The symptom-group is an exceedingly complex and varied one, but the most striking disturbances are those connected with the processes of metabolism; the patient is unable to replace by food the active waste occasioned by the physiologic functions. In consequence of this, nutrition suffers, vital force becomes diminished and there is functional disturbance of practically all the organs of the body. The stomach and the processes of digestion become particularly enfeebled and as a consequence there arise the symptoms of atonic dyspepsia, with lack of appetite and inability of the digestive organs to prepare the food for assimilation. The patient's vital powers are at a low ebb and nature's method of recuperation, that is, by assimilation of food, is effectually inhibited by inability of the organs to furnish the required properly prepared nourishment. Every physician has many times realized the absolute uselessness in these cases of the ordinarily employed tonics, iron, arsenic and strychnine. It is soon apparent that the remedies are either not absorbed or if they do enter the system, they fail absolutely to re-establish the proper ratio of metabolic waste and repair. It is now universally conceded by authorities that the first requisite in the treatment of this class of cases, is to foster the patient's nutritive functions so that food will become assimilated and thus restore wasted tissue and impaired vital forces. The stomach is the organ of prime importance and its normal functional activity must be re-established by remedies which have a direct tonic alterative and stimulant influence upon its enfeebled, inactive mucous membrane. Stomachics—gentian, taraxacum, phosphoric acid, etc.—are the agents of most service. When, however, these stomachics are combined in a certain manner with a remedy which, according to the highest medical authorities, is the best promoter of assimilation, the indications for treatment are completely met. Gray's Glycerine Tonic Comp. combats malnutrition upon the most rational scientific basis, that is, it re-establishes normal nutritive processes by its stimulant and alterative influence upon the digestive organs and also furnishes the wherewithall—glycerine—to cause the assimilation of food and medicines. It gives nature the needed chance to resume its normal work of repairing exhausted vitality and wasted tissue. While primarily a stomachic Gray's Glycerine Tonic Comp. is of greatest value in all conditions of systemic depression or exhaustion occurring either independently or as a consequence of severe organic diseases such as tuberculosis, Bright's disease, etc. It antagonizes depression by propping the natural functions of the body, by engendering appetite and ensuring the absorption and assimilation of food—nature's method of repairing waste.

Toxic Effects of Boracic Acid.

Dr. J. J. Evans, (British Medical Journal). The increasing use of boracic acid for medicinal and preservative purposes is sufficient reason for a further record of some untoward effects which have been produced by the drug when given internally. About five years ago I had occasion to treat a case of cystitis with boracic acid in increasing doses of gr. x to gr. xx three times a day. When it had been given for about three weeks an erythematous rash spread over the man's neck, face and head. This was followed by some subcutaneous edema and a fine scaly dermatitis. His salivary glands became enlarged, and eventually the hair on the face and head fell out, so that in about a fortnight he was perfectly bald. The drug was discontinued, but it took about six weeks before there was any reappearance of hair on the face and head. He eventually made a complete recovery.

I have since administered boracic acid in many cases of cystitis and urethritis, and when it has been given for some time and in the above doses I have observed similar effect—that is, an erythema followed by a fine scaly exfoliation. Immediate discontinuance of the drug has prevented the development of the more severe symptoms. In one case, however, in which it was inadvertently continued the hair fell out to a slight extent, and there was marked exfoliation of the skin, especially on the hands, with onychia and splitting of the nails. As syphilitic infection could be excluded with some certainty, and as the symptoms disappeared when the drug was dropped, I can only conclude that this was entirely due to the action of boracic acid on the skin and appendages.

"I have given your Neurosine (Dios) a thorough trial in a severe case of Neurosine with 'Tachycardia' and it has given entire satisfaction. In a case of Epilepsy which I had in my outdoor Clinic, the results, so far, are excellent."

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Inasmuch as some difficulty is experienced by physicians in procuring Thialion, we will, on receipt of one dollar, send one bottle containing four ounces, sufficient for three weeks' treatment, prepaid to any address.

Literature on Application.

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3

A Case of Nasal Vertigo.

Dr. Lacroix mentions this case (Journal of Laryngology):

As many physicians are reluctant to accept the nasal lesion as the cause of vertigo in certain cases in which the symptom ceases after intranasal treatment, the author relates the following example, in which it is impossible to put down the happy result either to mere counter-irritation or mental suggestion. The patient was a lady of thirty-eight, who consulted the author for some trivial throat affection. Three small polypi were found in the right middle meatus, and were removed under cocaine without more ado. The patient experienced no pain at all, and the whole affair was of the most trivial character. Ten days later the patient returned and stated that she had been a new woman since the previous visit. She then related for the first time that for more than a year she had suffered with giddiness on making the least movement, and this had been very marked when walking. On several occasions she had fallen. A variety of treatment had failed to give relief, and supposing the trouble to be intractable, the patient had accepted it as the inevitable. She was therefore quite unprepared for the complete suppression of the vertigo, which took place immediately after the removal of the polypi. There is, therefore, no question here of suggestion or of counter-irritation.

"Vin Mariani."

is essentially the brain and nerve tonic of those who have talent and genius. These it is who compose the great army of intellectual workers, and the ravages made upon their nervous systems by the demands made upon them are at times truly appalling. This damage and consequent drain yield to nothing more quickly than to "Vin Mariani." The most noted European physicians, literateurs, musicians, singers, artists and diplomats have sent the most flattering letters to M. Mariani extolling his product. Not only these but crowned heads as well have been mentally invigorated and rejuvenated by "Vin Mariani" and never tire of speaking words in its praise. It must be acknowledged that unsolicited testimonials, couched in such glowing terms, from such sources, are the best evidence possible that can be offered for the merits of the preparation. When "Vin Mariani" becomes as well known in this country as it is in Europe, it will be adopted as one of the indispensable remedies in the household. —*The St. Louis Medical and Surgical Journal*, May, 1899.

The Management of Patients Before and After Laparotomy.

In the course of an interesting and practical paper with the above title, read before the New York Medico-Surgical Society, by Dr. Frederick Holme Wiggin, Visiting Gynecologist to the City Hospital; Surgeon to St. Elizabeth's Hospital, it is advised:

"If the operation is to be performed at an earley morning hour (i. e., 8 A. M)., the patient should be given a peptonized milk punch at eleven o'clock the previous evening, and if he awakens at 5 or 6 A. M. one ounce of Liquid Peptonoids may be given, but nothing more. It has been the writer's experience that a small amount (one ounce) of stimulating and concentrated food, administered about two hours prior to the taking of the anæsthetic, diminishes the liability to heart failure, and also lessens the nausea and vomiting which frequently follow the return to consciousness. If an afternoon hour has been decided upon, another peptonized milk punch may be given the patient when he awakes, and one ounce of Liquid Peptonoids at 11 A. M."

In considering the after treatment, the distinguished author says:

"With the passing of these first twelve or eighteen hours, if the patient is not suffering from nausea or vomiting, and the pulse rate is much the same as before the operation, a drachm of Liquid Peptonoids or of some other similar preparation may be given, and repeated, if well borne, every twenty minutes until four doses have been taken, when after an interval of two hours a small quantity of equal parts of milk and lime water or of peptonized milk may be given from time to time, until four ounces has been taken. After this there should be an interval of two hours and then an ounce of Liquid Peptonoids may be administered."

Wet dressing made by saturating sterile gauze with menthoxol are recommended very highly in the treatment of all wound surfaces. Healthy granulation is stimulated, pus destroyed and its further formation prevented. Camphoroxol in the same way makes a superior dressing for the umbilicus in the new born. Both are non-irritant, harmless, and besides being powerful germicides exert this action for a longer period than most antiseptics of this nature. They are stable and retained their undiminished activity for months.

"I am meeting with every success to be asked for in the administration of Neurosine (Dios) in Epilepsy."

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Chesterville, Ills.

A SIMPLE AND MOST EFFECTIVE

Treatment of Chronic Leg Ulcers

Thoroughly wash and irrigate the ulcer and adjacent parts: after drying apply **Antinosine** (pulv.), distributing the powder lightly over the entire surface. Over this place a nosophen-gauze dressing, the whole held in place by a roller bandage. In cases with hard infiltrated borders, precede the above treatment by curetting.

ANTINOSINE

(the sodium salt of tetraiodo-phenolphtalein) has been proven by extensive and most severe clinical tests to be beyond question the most efficient of all existing antiseptics in the treatment of ulcers and abscesses generally, infected wounds of any nature: very useful in palliative treatment of cancerous ulcerations, lupus, etc. ANTINOSINE is absolutely non-toxic, non-irritating and odorless. It is freely soluble in water, and in solutions of 1 to 2½ per cent. gives most excellent results in cystitis, as an injection in gonorrhœa, as an antiseptic fluid in ear, nose and throat practice, etc.

Literature on request.

Sole Agents for the U. S. and Canada:

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Salophen The Safest, Most Agreeable and Reliable Anti-rheumatic.

An Important Advance in Gonorrhœa Therapeutics. **Protargol**

Somatose A Scientific Food, Tonic and Restorative.

The Chalybeate Tonic and Nutrient. **Ferro-Somatose**

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Selling agents for the Bayer Pharmaceutical Products:

Aristol, Creosote Carbonate (Creosotal), Europhen, Ferro-Somatose, Guaiacol Carbonate (Duotal), Hemicranin, Heroin, Iodothyrine, Lacto-Somatose, Losophan, Lycetol, Phenacetin, Piperazine-Bayer, Protargol, Quinalgen, Salicylic Acid, Salophen, Somatose, Sulfonal, Tannigen, Tannopine, Trional.

Uterine Cough.

Schaeffer makes the following statement (Medical Standard):

In those predisposed, such as neuropaths and sufferers from genital diseases (especially during menstruation and pregnancy), cough may at times be induced by isolated contract with the fornix vaginæ.

In those so predisposed, pathological processes which involve the board ligaments, and especially Douglas' pouch, may cause reflex cough, just as they cause reflex acne and hyperemesis. In the latter conditions abnormal fermentation and auto-inoculation are probably also present.

In those predisposed to cough as above stated, irritation of the lower third of vagina and vulva can occasion only local reflexes—nothing remote, such as a cough, can occur.

Uterine cough is produced by irritation on one side of the utero-vaginal fibers of the hypogastric plexus which supply the fornix vaginæ and collum uteri, and, on the other side, the spermatic plexus, hemorrhoidal nerves and ganglia imbedded in the broad ligament which supply the fundus uteri and ovaries.

Irritants which affect the nervous pudendus are at first localized in their reflex effects.

Reflex phenomena may be (a) essential physiological reflexes in remote motor and vaso-motor territories, which, through the neuropathic basis are easily set in motion; (b) radiation in the case of neuropaths, where resistance is weakened; (c) irregular radiation in high degrees of neuropathy.

Cases of tuberculous habitus, or predominance of stomach symptoms, play a separate part in the genesis of nervous cough.

Local treatment, especially by pessaries, acts promptly when pathological conditions are complicated, as in the case of retroflexion and prolapse, etc.

Accidents in Laparotomy.

Poroschin (British Medical Journal) relates two cases of injury to the urinary tract occurring in the course of laparotomy. The first case was that of a woman aged 53, who was operated on for a cystic tumor of the right ovary and a cyst of the broad ligament on the same side. In separating the latter from its adhesions the right ureter was cut across. This was noticed during the operation through the escape of urine from the renal end of the duct. The two ends were, therefore, freed from the adherent tissues and joined together by four fine silk sutures. The stitches were passed through the serous and muscular coats only, leaving the inner layer intact. For greater security a piece of peritoneum was put round the ureter and fixed in position by a few stitches. The abdomen was closed in the ordinary way, no drainage being provided. The patient made an uninterrupted recovery, getting up on the twentieth day and leaving the hospital on the thirty-seventh day after the operation. The other case was that of a peasant woman, aged 43, who underwent laparotomy for a large subserous fibromyoma uteri. In this case the fibromyoma was firmly attached to the bladder walls, which were torn in the attempt to separate the tumor from them. After the removal of the growth the rent in the bladder was repaired by uniting the edges of a series of sutures in layer; the mucous coat was stitched together by continued sutures while the muscular and serous coats were united by interrupted sutures. A catheter was left in the urethra for the first four days. This patient also made a good recovery.

Post-Partum Management of Uterine Displacements.

Eugene Coleman Savidge, (New York Medical Journal), says:

All post-partum displacements of the uterus are of the same general nature. The question of their prevention is one of the gravest importance, having a bearing upon longevity itself. In some few cases, "no matter what you do," the womb will obstinately remain displaced. Trusting any post-partum case to nature is the wrong thing to do. Doing the right thing will obviate most of the displacements and rob those that persist of their danger.

This malady (of uterine displacement) is the most prevalent ill among women. It can largely be prevented when both laity and profession appreciate its frequency, its gravity, our limitations in coping with it, and the ease with which it can be prevented in most cases. Trusting post-partum cases to nature is the wrong thing to do. And, moreover, "meddlesome midwifery"—so-called—is the only midwifery a scientific man should deign to practice.

He advises: Termination of the second stage of labor before the muscles forming on the pelvic floor have been permanently deranged by over-stretching. Keeping the woman from going about until involution is complete. Closing carefully all tears in the pelvic floor or perineal body. Supporting the uterus in position by pessaries or tampons when it is heavy and tends to displacement. To administer, in proper doses, iron, ergot and digitalis when subinvolution exists.

Resinol (TWO SIZES 50c-$1.00)

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UNRIVALLED AS AN ANTIPRURITIC, ANTISEPTIC, ANTIPHLOGISTIC, NUTRIENT, ETC.

A Specific for Eczema, Pruritus Ani, and all itching troubles.

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A DESIDERATUM AS A VEGETABLE ALTERATIVE, LAXATIVE TONIC AND ANTACID.

Indicated in all skin Diseases, Chronic Constipation and disorders of Digestion etc.

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AN ABSOLUTELY PURE NON-IRRITATING, EMOLLIENT AND PRESERVATIVE DETERGENT.

THE BEST SOAP FOR THE SKIN, THE HAIR, SCALP ETC.

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A CLEAR AND POWERFUL STREAM.

The latest and most expensive accessories are used in connection with this machine making it the most powerful and complete outfit in the South at the present time.

Prices for Complete and Thorough Examinations will be $10.00 to $25.00.

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Charlotte, N. C.

A Case of Puerperal Fever Treated with Unguentum Crede.

In the Deutche Medicinische Wochenschrift of March 9th, 1899, Dr. Peters, of Eystrup, Hanover, records a case in which the ointment was employed with excellent effect. The patient was a VII. para, thirty-three years old. During the confinement a manual separation of the incarcerated placenta had to be undertaken, occasioning great hemorrhage and a very dangerous collapse lasting for several hours. Thirty-six hours thereafter there was a temperature of 40.5 deg. C. (104.9 deg. F.), with violent headache and anorexia. There were no local symptoms. On the next day her symptoms were the same, and her fever continued.

On November 8th, 1898, the lochia had become very foul smelling; the temperature was 39.4 deg. C. (102.9 deg. F.). An inunction of 3 grams (45 grains) of Unguentum Crede was given. In the afternoon her temperature was 39.2 deg. C. (102.5 deg. F.). On the morning it had fallen to 38.6 deg. C. (101.5 deg. F.), and another inunction of similar amount was administered; in the afternoon her temperature was 38.2 deg. C. (100.8 deg. F.). From the 10th to the 15th her temperature varied between 38.6 deg. C. (101.5 deg. F.) and 37.2 deg. C. (99 deg. F.). From the 15th to the 18th, there was a gradual rise to 39.7 deg. C. (103.5 deg. F.), occasioned by a phlegmasia alba dolens of the left leg, which was treated locally with wet compresses (Priessnitz), and disappeared without abscess formation. A third similar inunction was given, and the temperature fell by the 19th to 38.5 deg. C. (101.3 deg. F.). Another inunction was given on the 19th; but the temperature rose again on that afternoon and the next day, and on the afternoon of the 21st, it was 39.4 deg. C. (102.9 deg. F.) again. A fifth inunction was then given, and the temperature fell to 37.8 deg. C. (100 deg. F.) on the morning of the 23d. A sixth inunction was then administered.

A similar inflammation of the right leg was cured during December 2d to 5th, by similar treatment, three further inunctions being given. The patient has now entirely recovered. It is worthy of remark that the prognosis was rendered worse by the acute anæmia and chronic bronchial catarrh from which the patient suffered, and by the bad nutrition of the patient, who lived in very poor surroundings.

A quicker cure might probably have been obtained by a more prompt and energetic employment of the salve; but on the one hand it was difficult to obtain it here, and on the other argyrosis was feared. No sign of the latter occurred, however, although 27 grams (7 drachms) of the salve was inuncted.

It was interesting to note the very visible influence of the inunctions upon the subjective condition of the patient. Always mentally dull, she was apathetic, ill tempered, monosyllabic, and hardly opened her eyes. On the day following the inunction she always greeted the physician with a smile when he came in, even if the fever continued, No other antipyretic or antiseptic measures were employed.

Tonsillitis with Albuminuria.

Dr. Keiper (The Laryngoscope) describes the case of a man, 32 years of age, the subject of albuminuria, and who was attacked by sore throat. Upon the upper part of the left tonsil there was seen an ulcer as large as a gold dollar, covered by an exudate similar to that of diphtheria. The exudate could be removed without causing the subjacent surface to bleed. The tonsil then appeared as if it had been curetted. It was treated locally with a 12.5 per cent. solution of silver nitrate. On the next day, after the second application of the silver, there was a hemorrhage from the ulcer. A mixture of dry tannic acid and antipyrine was made use of and the hemorrhage was arrested, but was renewed three hours later and this time with more severity. It persisted in spite of all efforts to check it, and finally stopped spontaneously. The patient died nine days later without any repetition of hemorrhage.

The author explains these hemorrhages by an alteration in the walls of the vessels of the tonsils under the influence of albuminuria. This alteration is similar to that met with in the same circumstances in the vessels of the retina and choroid.

Skin Diseases.

Luigi Galvani Doane, M. D., formerly physician to Department of Public Charity and Correction, New York, N. Y., finds Unguentine a remedy *per se*. It is soft, easily applied, its absorptive powers are good and its antiseptic properties are better.

"I have used Unguentine with satisfactory results in a large number of cases of eczema, comedones, psoriasis, and lepra vulgaris and find it especially adapted in all such cases.

"I am well satisfied with the use of Unguentine in general practice in cases where it is indicated, such as fresh burns, cuts, bruises, boils, felons and sore nipples."

A Progressive System of

...Infant Feeding

NO single Food is suitable for the Infant for the whole period of the first nine months. At birth, the digestive powers are only able to assimilate human milk or its physiological equivalent; and it is not until the child is six months old that any starchy Food is admissible.

ALLEN & HANBURYS have introduced a SERIES OF FOODS to meet the increasing requirements of the infant economy.

The "Allenburys" Milk Food, No. 1

is, as far as possible, an exact equivalent of human milk. It is prepared in the form of a dried powder, from fresh and carefully selected cow's milk, at their Factory at Ware. The proximate composition of the cow's milk having been ascertained, the excess of casein is removed and the deficiency in fat and milk-sugar made good. The mixture is then sterilized and concentrated in *vacuo*. Sterilized (*boiled*) water is then added in the proportions indicated on the labels, and a perfect humanized milk is obtained. The portability, ease of mixing, and freedom from bacterial contamination render this preparation invaluable not only for general use but for delicate infants suffering from diarrhœa, and also in those cases where the milk supply is not above suspicion, or where long journeys have to be taken, whether by land or sea. This Food, as well as the **"Allenburys" No. 2**, is now being extensively used in India and tropical climates, and is found to keep perfectly in the hermetically sealed tins.

This Food should be given for the first three months.

The "Allenburys" Milk Food, No. 2

is identical with No. 1, but contains in addition small quantities of maltose, dextrine, and soluble phosphates, derived from the digestion of whole meal. These are included to meet the increasing requirements of the infant economy; but it should be understood that there is no **unaltered starch** present.

This Food is designed for infants from three to six months of age.

The "Allenburys" Malted Food, No. 3.

This preparation is a perfectly assimilable farinaceous Food. It is prepared on Baron von LIEBIG'S principle of malting, but by greatly improved methods. It differs from other forms of malted food in that the malt is present in a soluble, concentrated, and most active form.

The basis of the Food is fine wheaten flour, rich in nitrogen, with this advantage, that a large proportion, but not all, of the starch is converted by the action of Malt Extract. The Food is rich in soluble phosphates and albumenoids, for the formation of firm muscle and solid bone.

It is prepared for use by the addition of cow's milk. With delicate children, however, the transition from No. 2 to No. 3 Food is too great, if cow's milk be used; it is better, therefore, to employ the **No. 1 Food** as a substitute for the cow's milk, thus ensuring the preparation being made with a true humanized milk.

A Sample of any or all of the Foods, and full descriptive pamphlet, will be sent free to any physician upon request. Address 82 Warren Street, New York.

Please specify on prescription the NUMBER of the Food desired

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Treatment of Asthma.

Goldschmidth closes an essay on this subject with a consideration of the treatment of the affections. (London Lancet). He divides it into (1) purely medicinal, (2) the physical, and (3) the inhalation treatment. He attaches great value to the use of morphine in some cases, especially where the attacks are infrequent but pronounced. If morphine is not well borne then chloral may be used in a dose of 2 grammes, to be repeated in doses of 0.5 gramme every quarter of an hour until sleep is induced. More than 5 grammes should not be given in this way. In cases of prolonged asthma with expectoration, iodides combined with expectorants and opium are often useful. Amyl hydrate also acts extremely well, but sulphonal and trional are useless. Stramonium fumigation may be of great value, but sometimes fails. Occosionally antipyrine and quinine may be useful. The attacks return after the chloroform narcosis passes off. Expectoration must be encouraged, and here the iodides are of most service; they may be given over long periods of time. In cases where expectoration is abundant iodides may not only be useless but harmful. Goldschmidt discusses the value of the compressed air cabinet.

This is useful in some of the sequelæ of asthma but not in the actual acute attack, which may indeed be made worse by it. Inhalations are far too little appreciated in asthma. Irritating inhalations which produce cough must be avoided. The author attaches some value to hydro-therapeutic treatment in some cases of asthma. The patient should gradually be accustomed to colder baths of short duration with douches. Even when catarrhal symptoms are present the body may be vigorously sponged with water at 18 deg. C. Warm drinks should be given at the same time. In some cases of permanent asthma baths at 27 deg. C. with douches at 12 deg. C. may be of service. When these fail, vapour baths may be of great value, but they are sometimes followed by untoward symptoms; they should be limited to two in the week. Finally, in case of an acute attack or an exacerbation the treatment is commenced with stramonium fumigation. If this fails, strong stimulation of the skin with hot water should be tried. If these measures have previously proved ineffective morphine or choral should be given.

The preparations of "Pepsin," made by Robinson-Pettet Co., are endorsed by many prominent physicians. We recommend a careful perusal of the advertisement of this well-known manufacturing house.

Tongaline and Quinine Tablets.

"One evening I was called to attend a gentleman, a member of my own family, who had just returned from a trip during which he had contracted a well-developed case of catarrhal fever as a result of a severe cold. His pulse was 120 degrees, temperature 102 2-10 degrees, skin hot and dry, pain all over the body and a splitting headache; all the mucous tissues were inflamed, involving the nasal tract, throat and bronchial tubes; the eyes were watery, and the nose was running, throat sore,—in fact his whole system was thoroughly congested.

It was very important that he should be able to travel within a day or two. I ordered him to take a hot foot bath, then drink a hot lemonade and go to bed. I left him six Tongaline and Quinine Tablets with instructions to take one every half hour, washing it down with plenty of hot water.

I saw him about seven o'clock the next morning and received the following report: about one hour after going to bed he commenced perspiring and began to experience a feeling of drowsiness, so that before he had taken all of the Tongaline and Quinine Tablets he fell into a refreshing sleep, from which he did not awake until five o'clock. I found his pulse was normal, temperature 99 degrees, skin moist, the pain entirely gone and all the unfavorable symptoms decidedly improved; in fact the trouble was thoroughly under control. I prescribed a mild cathartic and by the followiug day he was able to go on his way rejoicing.

Since then I have frequently given Tongaline and Quinine Tablets in similar conditions with marked success each instance."

Frank A. Barber, M. D.,
Chicago, Ills.

A Non-Depressing Analgesic.

Dr. W. Gray, (Medical Press and Circular) states that the experience which he has had with Salophen leads him to believe that its greatest value and efficacy lie in its employment for relief of muscular, gastric, gastro-intestinal, joint and head pains associated with influenza. As to its antipyretic value he regards it as inferior to phenacetin, for the reason that its action is more delayed and the effect passes off sooner. For affording relief for influenza headache, especially when associated with giddiness and noises in the ears, salophen in doses of 15 grains, three or four times a day, is particularly valuable. Dr. Gray states that he has never noticed any depression following upon its administration.

IT IS IMPORTANT

For the dispensing pharmacist to recognize the right of the physician to dictate, not only what remedy he shall use in a given case, but whose preparation he prefers, for the quality of the medicine is often as much a factor in the cure of disease as a correct diagnosis.

Most druggists appreciate this fact, some are indifferent to it, A few ignore it, specification is therefore a necessity.

Syrup Albuminate of Iron.

An organic compound of Iron, representing in a purified and soluble form the albuminate and salts (phosphates) present in the blood. It contains 0.7 per cent. metallic iron in a form readily absorbed and is very efficient in medicinal action. This combination of iron approximates the natural forms in which the metal is present in the animal system, and possesses a marked value in anemia and chlorotic neurasthenia where prolonged administration of iron is indicated. It is not only free from all tendency to cause digestive disturbances, but is of positive value in these conditions during convalescence. One part of this syrup represents about fifteen parts fresh bullock's blood.

Cordial Pas-Carnata-Merrell.

DARTMOUTH PHARMACY, "BY ALL MEANS TRY IT."
ESTABLISHED 1798.
L. B. DOWNING, Box 444. HANOVER, N. H., July 17, 1895.

WM. S. MERRELL CHEMICAL CO.:

GENTS: In June I ordered your Fl. Ext. Passion Flower, as an experiment, for a son of 12 years, who has made very rapid growth, and was at the time very nervous, and several physicians had tried in vain to help him, one an uncle in whose family he staid for a month. My wife happened to see your circular on Pas-Carnata, and on consulting the doctors who had treated him, they said, "by all means try it."

The result was truly marvelous.

There was a change for the better in four days. Facial and shoulder muscles were twitching when we commenced using it. In a few days they disappeared, and on 15 drop doses three times a day he keeps all right, apparently.

I shall speak a good word for the medicine, as I have already done. Will you please send me some circulars to give to my physicians? Very truly yours, L. B. DOWNING.

NATURAL---FROM OIL OF WINTERGREEN.

TRUE SALICYLIC ACID in Crystals--Merrell.

TRUE SALICYLATE SODIUM IN POWDER AND TABLETS--Merrell.

The investigations of Professor Latham (Cambridge, England), confirmed by Drs. Charteris and MacLennon (University of Glasgow), warn the profession against the use of artificial acid of commerce and its Sodium salt.

They conclude that Commercial Salicylic Acid AND ITS Sodium Salt

- are slow, but certain poisons.
- produce symptoms closely resembling delirium tremens.
- patients become delirious.
- dangerous to human life.
- have to be watched and not to be trusted.
- retard convalescence
- should not be administered internally, however much they may have been dialized or purified.

For internal use the true Salicylic acid and its Sodium salt should only be dispensed.

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JOHN M. SCOTT & CO., Charlotte, N. C,

The Vomiting of Pregnancy.

Dr. Bacon says (Amer. Jour. of Med. Science, June, 1898):

The abnormal irritability of the nervous system, including the vomiting center, is to be allayed by keeping the patient in the horizontal position, by attention to the skin, bowels, and kidneys, using rectal, and, if necessary, hypodermic injection of salt-solution.

The hysterical condition which is so commonly present should be controlled by strengthening the will and influencing the dominant idea of the patient.

All sources of peripheral irritation should be discovered and treated.

In extreme cases subcutaneous saline injections serve the three-fold purpose of (a) diluting the blood and increasing vasular tension; (b) eliminating toxins through renal and intestinal emunctories; (c) furnishing two most important kinds of food.

Induction of abortion is never indicated. At a stage when it is safe and efficient it is not necessary, and in extreme cases it adds greatly to the danger, rarely stops the vomiting, and can be replaced by the artificial serum.

Veratrum Viride in Pneumonia.

Called to a case previously healthy, with history of distinct chill or chilly feelings, followed by sudden rise of temperature ranging from 103 to 105, pulse full and strong, but breathing rate quickened in a marked degree beyond its normal ratio to the pulse rate, with cough, rusty sputa and subcrepitant rales, we may confidently diagnose pneumonia. Now what shall we do?

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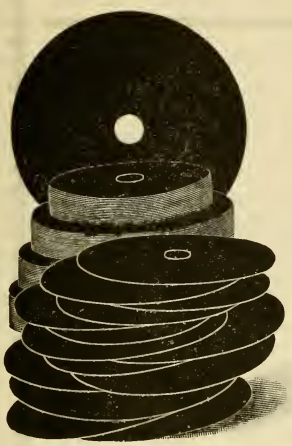

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A. C. BUXTON, M. D.

Salem, Mass.

The Memphis, Tenn., Scimitar of April 24th says that: the Seaboard Air Line and the Nashville, Chattanooga & St. Louis railroad brought into Memphis yesterday two cars of freight which had made an actual running time of four and one-half days from New York. This is the fastest time made up to date in this city by a rail and water line, and is close to the time made by the all rail lines, none of which run it in less than four days.

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(Department A.) MINNEAPOLIS, MINN.

Acute Gonorrheal Meningitis.

J. S. Wooten (Journal American Medical Association) reports this case:

The patient was thirty-six years of age, weighed 175 pounds, and was in perfect health up to the contraction of an acute gonorrhea, the proper treatment of which was entirely neglected until he sought medical advice with a well-developed gonocystitis. Improvement was marked and satisfactory after a few days' treatment. The patient was not seen for three days, and the doctor, when called, found that he had had a rigor, temperature was 103 deg., skin bathed in perspiration, pulse full, quick, and bounding. He was hilarious, excited, and talked at random; complained of headache, vertigo, and nausea. He was fairly rational when his attention was attracted, but this gave place to an increasing drowsiness, which deepened into coma and death at the end of about ten days. Toward the close of the period a gonorrheal arthritis developed in the left elbow and right knee-joint. Marked trismus, deafness, hiccoughs and muttering delirium preceded the end, the meningitis having lasted twenty-one days.

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The Causation and Treatment of Consumption.*

I have little faith in specifics in the treatment of tuberculosis. I believe it is entirely a disease of malnutrition, as a result of defective elimination, and all therapeutic measures must be directed toward the improvement of the digestion and assimilation. Consequently I am explicit in my instructions as to diet, forbidding absolutely the use of alcohol, syrups, potatoes in any form, pork, veal and all such dishes as are difficult of digestion and prone to fermentation. In many of these cases of alimentation I have found it beneficial to give some good diastasic extract of malt, that known as Maltine proving most satisfactory, for the reason that it is the only malt extract known to me which gives generous proportions of nitrogenous and phosphatic matter, with a proper proportion of carbohydrates; being made, as it is, from wheat and oats, in conjunction with barley, instead of barley alone. Tonics, stimulating the nervous system and digestive organs, and assisting in the reconstruction of blood and tissue, are important. Stimulating baths may be used with good results. It is, in my opinion, a mistake to overwhelm the body with frequent injections of undetermined animal serum, thereby producing either a severe reaction or possible accumulative toxemia.

*Abstract of paper by Dr. John R. Kestell.

Meat and Fruit.

The majority of people eat more meat than they require. Meat eaten once a day is sufficient for a person not engaged in manual labor or who does not take much strong outdoor exercise. A large number of complaints contracted owe their origin to the consumption of food which entails a greater drain on the gastic juices than the system is able to withstand. The cures attributed to the grape occur for the most part with those who are accustomed to high living, and are really owing to the fact that the organs of digestion are given a much needed rest. Semi-starvation would answer the purpose almost as well. For the person whose work lies chiefly indoors a mixed and varied diet is most conducive to good health.

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The Charlotte Medical Journal.

VOL. XIV. CHARLOTTE, N. C., JUNE, 1899. No. 6.

A Study of the Bacteriology of Specific Urethritis.*

By Eugene B. Glenn, M. D., Asheville, N. C.

This is a study which is bound to interest the general practitioner as much as any other with which we have to deal to-day.

By the gonococcus alone, or aided by other pyogenic organisms, serious and even fatal results may follow its attack on the kidneys, eyes, heart and its mombranes, and the coverings of the spinal cord, brain, etc. Taken as a whole, we are certainly warranted in saying that the infection of the gonococcus is one of the most formidable and far-reaching infections by which the human race is to-day attacked.

Recently I had the opportunity of seeing a case of specific urethritis in one of the Philadelphia hospitals, of twenty-five years' duration. The patient had an organic heart lesion, produced by this disease, and a well known physician, Professor J. C. Nilson, said in speaking of this case that he was more impressed every day with the truthfulness of the saying he heard when he was a young man that "gonorrhea is a greater menace to society and to the patient than is syphilis." It is regarded very lightly by the laity, and we often hear the remark made by liars, fools, or both, that they care no more for a case of gonorrhea than a bad cold, and that five cents' worth of this and ten cents' worth of that in a pint of water will cure them in a week. But very frequently we have these patients come to us after having tried all the "sure cure remedies" in the land. He tries physician after physician until the physicians all become disgusted and the poor sufferer gives up in despair, and sometimes death is produced by some lesion of kidney, nervous system, uterine appendages, etc.

In order that we as physicians may be able to treat this terrible disease more intelligently it is necessary for us to know something of its bacteriology.

It wasn't until the year 1879, just twenty years ago, that the micrococcus now known to be the cause of gonorrhea, and often spoken of as the gonococcus, was first described by Neisser. Six years later it was cultivated on blood serum by Bumm. Earlier announcements were made of the obtaining of pure cultures on peptone-gelatine and other media, which was certainly erroneous, because it is now known that it does not really grow on such media.

The relationship has been so conclusively established to the disease, by means of inoculations and cultures in the human subject, that there is no room to doubt the diplococcus of Neisser being the specific cause of gonorrhea.

The organism is a small micrococcus, of 0.8 to 1.6 mm. in length and 0.6 to 0.8 mm. in diameter, often occurring in the diplococcus form, and appears somewhat biscuit-shaped when seen under a high power.

These organisms are found for the most part within the leucocytes, in the pus cells of gonorrhea in both male and female, especially after the discharge becomes purulent; but when the secretion is glairy, in the earliest stage, a considerable number may be found adhering to the surface of desquamated epithelial cells or lying free.

The gonococci gradually diminish in number as the disease becomes more chronic. They may be found in considerable numbers in long standing cases.

When the process of degeneration begins in the cocci, they have a spherical appearance, of various sizes, some being swollen considerably, lying singly or in small groups. They are found in some cases in the well known "tripper faden," in the urine, which is made up mostly of pus cells, epithelial, and small amounts of fibrin. Bumm cultivated pure cultures from gonorrheal pus, and carried the organism through twenty successive generations, and then introduced it with positive results in the healthy urethra of men.

After the first few days the discharge will be most likely to contain streptococci and staphylococci.

Bosc mentions fourteen other organisms besides the common staphylococci which occur in pus. And just so long as the "tripper faden," or pus filaments, are found in the urine it is possible for the gonococci to be present; and the gleet that follows often contains the organism. The gonococcus is infective on any mucous surface,

*Read before the North Carolina Medical Society, at Asheville, N. C., May 30, 1899.

and has an extraordinary affinity for that of the eye. When introduced into the eye, unless treated within forty-eight hours, it may cause its loss, hence the importance of cautioning the patient of its danger. The patient may spread contagion as long as the gonococci persist. Sometimes they are latent in the urethra and set up a relapse when the patient takes some irritating substance, such as alcohol, etc.

The gonococci are hard to kill, taking 60 deg. C. to destroy life; and they also withstand drying fairly well, as was demonstrated by Kratter when he found them present on washed clothing six months after the original soiling, and found they still took the stain well. The cultivation of the gonococcus requires considerable bacteriologic skill, as the suitable media and conditions of growth are restricted.

"Blood agar," solidified blood serum, urine agar and Wertheim's medium, which consists of one part of fluid serum, added to two parts of liquified agar at a temperature of 40 deg. C., and allowed to solidify by cooling, are the most suitable media.

The period and active growth and duration of life are somewhat longer on the medium of Wertheim.

Turro pointed out the fact that the gonococcus may be cultivated in acid urine and gelatine containing acid urine, where in the latter the gonococci grow near the surface, while the pus cocci sink deeper into the medium. He also asserts, what was ordinarily presumed not to be true, and that is the communication of the disease to animals; and this fact was demonstrated by using gonococci grown on acid gelatine and readily communicating urethritis to dogs without any *lesio continni* necessary.

To obtain cultures, take some pus on the loop of a platinum needle and inoculate one of the media above mentioned by leaving small quantities at different points on the surface. The young colonies are visible often within twenty-four hours and almost always within forty-eight hours after inoculation. They usually reach their maximum size on the fourth or fifty day and are usually found dead on or before the ninth day. It is necessary to sub-culture every three days or their viability is lost. But growth may be maintained indefinitely by successive sub-cultures at short intervals, and the organism gradually flourishes more luxuriantly. At the same time their microscopic appearance will show a marked tendency to undergo degeneration. A pure culture of the gonococcus assumes an appearance similar to a mulberry, and is of a yellowish white color. A watery solution of any of the basic analine dyes stains the organism rapidly and deeply. It is probably stained best by Loeffler's methylene blue. It is easily decolorized, and an important point in the microscopical examination is that it completely loses its stain by Gram's method. The organisms are generally found within the pus cells and this should always be sought for as one of the diagnostic points, because it has been shown by some observers that urethritis is sometimes caused by other organisms, such as the bacillus coli communis and the staphylococcus pyogenese.

But position in the cells is not positively diagnostic. Since cocci resembling the gonococci have been found in the urethra, we must have added to shape and position the refusal to stain by Gram's method before we can say positively that the cocci found in the urethral pus are gonococci. The organism may be separated from fluids which contain a number of other organisms by Wertheim's ingenious method of plate culture of the gonococcus. The medium consists of a mixture of equal parts of human blood serum and agar (two per cent). This is rendered sterile and put in suitable quantities in two or three test tubes and brought to 40 deg. C. These are then inoculated in the same manner as gelatine tubes for ordinary plates. Now an equal amount of ordinary agar, which has been allowed to cool to 40 deg. C., is added and thoroughly shaken up and quickly poured out on Petri's dish. This is allowed to solidify by cooling and then incubated at a temperature of 37 deg. C.

At the seat of all true gonorrheal infection and gonorrheal discharges in the urethra the gonococcus is invariably present. This has been repeatedly demonstrated both by culture and by the microscope. That the disease is always transmitted directly by contagion is a clinical fact borne out by the description of the conditions of growth in culture, from which it seems practically impossible for its life outside the body in natural conditions. Repeatedly such experimenters as Wertheim, Bumm, Steinschneider, and others, have made inoculations of pure cultures on the human urethra, both of the male and female, and the disease resulted with all its characteristic symptoms. Since the casual relationship has been so completely established by such men as mentioned above, it is interesting to note how the character of the natural disease agrees with the conditions of growth and pathogenic effects of the organism. Wertheim found a small amount of suppuration and local peritonitis after the injection of pure cultures of the gonococcus in the peritoneal cavity of white mice, the organism being

found in large numbers in the leucocytes. He found them penetrate the peritoneal lining and stop in the sub-endothelial connective tissue, showing little or no power of proliferation, soon disappearing without the inflammatory condition spreading. Other experiments, like the injections of pure cultures in the joints of rabbits, dogs, guinea-pigs, etc., show that the gonococci rapidly die out after causing an acute inflammation, which, however, soon subsides. These experiments all show how little power the organism has of multiplying and spreading in the tissues even when present in large numbers, and that it produces only a limited amount of inflammatory change in these animals. In the human urethra the gonococci penetrate the mucous membrane between the cells, and cause a loosening and desquamation of many of these epithelial cells, and at the same time inflammatory reaction in the tissues below, attended by a great increase of secretion.

The leucocytes take up a large number of the gonococci. But it must be noted that though there is such an abundant phagocytosis, the cocci within the leucocytes are usually quite healthy in appearance, that the establishment of the phagocytosis is not followed by a rapid cure of the disease. The organisms also penetrate the subjacent connective tissue, and are found with extensive leucocytic emigration around the lacunæ, when they are contained in great numbers in the leucocytes which constantly carry the organisms to the surface and discharge them. But they are able to maintain their footing by multiplication, till such a time as the disease comes to an end naturally.

At present we have no data for demonstrating whether the gonococcus is present in the prostate and seminal vesicles in the acute stage, in cases where there is considerable degree of inflammation. The same can be said of cystitis and orchitis in the early stage, before other organisms appear in the urethra during the more chronic stage. Though it is possible for the bacillus coli and the various pyogenic cocci, so often present in the urethra, to extend back or be carried back by means of a catheter to the bladder and set up cystitis, the bacteriology of these conditions and of buboes have not been fully demonstrated yet. But we know that these conditions are sometimes produced by pyogenic organisms and varieties of diplococci when present in the urethra in abnormal conditions and the gonococcus not present. The gonococcus is almost invariably situated in the urethra, in the female when infected with this disease, and next in frequency is the cervix uteri. The gonococcus has been found in the Bartholinian gland, body of the uterus, Fallopian tubes, peritoneum, etc., producing their usual destructive work. I wish to emphasize especially the harm done in the Fallopian tubes, because it is the most frequent cause of pyosalpinx (Montgomery and Krusen). The gonoceccus has been cultivated from eases of arthritis and inflammation of tendon sheaths following gonorrhea by such men as Neisser, Lang, etc. The gonocoocus has been cultivated from a pleuritic effusion along with the arthritis in the same individual. One case is reported by Bordoni-Uffreduzzi in which the gonococcus was cultivated from the affected joint, and afterwards produced gonorrhea in the human subject by an inoculation with the cultures obtained. Gonorrheal endocarditis has not been absolutely proven by means of cultures. Though organisms have been found in the vegetations which, with reference to staining, position in the leucocytes and microscopical appearance, corresponded to the gonococcus, Leyden and Michealis failed in their experiment to obtain a culture on the media used; but from the fact that no organism was obtained on the media, it favors the view that the organisms were certainly gonococci.

I wish to express thanks to Dr. Randle C. Rosenberger, Demonstrator of Bacteriology in the Laboratories of the Jefferson Medical College Hospital of Philadelphia, for his aid in the study of the microscopical characters, cultivation and distribution in the tissues of the gonococcus in specific urethritis by a number of experiments in the laboratory.

DISCUSSION.

By request Dr. E. C. Levy, of Richmond, Virginia, Professor of Bacteriology in the Medical College of Virginia, responded as follows:

Dr. Glenn asked me to say a few words on this subject. He has put me in a very embarassing position, because in his paper he has fully covered the ground. There remains scarcely anything to say. I do wish to say, however, a few words, which I hope are pertinent enough to the subject under discussion, I think, that the diagnosis of gonorrhea bacteriologically is not always easy and satisfactory. Dr. Glenn has fully called attention to the points we have to go on. They are, first, the morphology and grouping of the parasite, second, its situation in the leucocyte, and third, its peculiar staining properties. Gramm's method, I think, is universally admitted to be a very unreliable thing unless we have exact data —the length of time in which the specimen has been subjected to the stain, to the iodine solution and to the alcohol. Without that

Gramm's method is not to be relied upon. Where these organisms are abundant the cases are in most instances very clear clinically. In the difficult cases, and, unfortunately, those in which it is really important that we should have some aid, gonococci are few in number. Those cases are generally cases of long standing, very mild cases, presenting a medico-legal aspect. The most difficult case I have encountered was an inflammation of the eye of a little boy about eight years. The child was the son of a gentlemen of high standing in Richmond, and everyone was very loth indeed to say that this child had gonorrheal opthalmia. Only after examining six coverslips was I able to find a single pair of micrococci, which were situated within a leucocyte. Of course I couldnot use Gramm's staining. I had to gave finally a merely provisional diagnosis that I thought it very probably gonorrheal.

There is one point which I have found very useful in diagnosticating this trouble where the secretion is scanty, and that is by the injection of a weak solution of nitrate of silver, five grains to the ounce. Following that there is ordinarily an increase in secretion, and on several occasions I have been able to demonstrate the gonococci in secretion obtained in this manner where without this it had been impossible to do so. I have forgotten who was the originator of this method. I have nothing further to say on this subject, because, as I said, Dr. Glenn has fully covered the ground.

Electricity as an Aid to the Physician and Surgeon,*

By E. B. Goelet, M. D., Saluda, N. C.; Member of the North Carolina Medical Society and American Medical Association.

In presenting this paper on the use of electricity in the treatment of disease, I wish to be understood, that it is not my desire to ignore the value of, or set aside the use of, those time honored remedies, which in the past have rendered such valuable aid to us, but to define the uses of this agent as an adjuvant to our armamentarium.

To-day electricity is a science, when only a few years ago it was an art; we have studied its physiological properties and action, harnessed its forces and placed a bridle upon its currents; the instruments now used in its application are the result of tireless study and continued experimental research on the part of the greatest medical electricians of the age, both in this country and Europe, and its use is no longer empyrical.

The currents I will briefly refer to in this paper are:

First—The galvanic or constant current.

Second—The faradic or interrupted induced.

In the galvanic current, we are mostly concerned in the chemical and physiological effects, in order to establish its therapeutical value.

The chemical action produced is known as electrolysis, which is nothing more or less than the separation into its component parts, of a compound body in solution, by the constant current; for instance, when a current is made to traverse a solution of chlorate of potassium, oxygen and chlorine are liberated at the positive pole, while hydrogen evolves from the negative, and the potash is seen to collect around it, likewise when the human tissues are subjected to this current, a decomposition occurs, whereby the constituent elements are separated or altered in their arrangement; this is possible because the elements are in a fluid state, and certain effects are produced, varying with the direction of the current and differing at the terminal poles. These effects are known as electrolytic, cataphoric, catalytic, electro-tonic and thermal.

Electrolysis occurs not only at both poles, but throughout the interpolar space, therefore we have positive and negative electrolysis, and that obscure process designated catalysis, which is the indefinable action that takes place in the structures embraced in the path of the current from one pole to the other. just where the effect of the positive pole stops and that of the negative pole begins we cannot exactly define, but the effect is always more marked in the immediate vicinity of the poles, while in the intervening spaces the greater the distance from the pole, the more obscure the chemical process becomes.

The body subjected to the action of the current is called the electrolite, so if the electrolite be the human tissues, the chemical decomposition is somewhat complex, and there is separated at the positive pole not only oxygen and chlorine, but the mineral acids also, the hydrochloric, sulphuric, nitric and phosphoric; while at the negative pole the alkalies of the tissues collect in the form of the hydrates of soda, potash, lime and ammonia.

The cataphoric action of the current is that property which enables the current to carry with it certain substances in solution in its transit through the tissues from the positive to the negative pole; this action is

*Read before the North Carolina Medical Society, at Asheville, N. C.

more pronounced at the positive pole with the majority of substances, though with some few we learn it occurs at the negative pole—this is then an electrical osmosis and its power to reverse the normal osmotic action can be easily demonstrated. It is this combined action of electrolysis and cataphoresis, that enables us to dispel tumors, to cause their disintegration and promote their absorption by the tissues.

There are many ways in which the use of the galvanic current may aid the surgeon in his work. and the specialist also should be equally interested, for he is often called upon to do much surgical work, and this form of electricity is most useful to them, since by means of it a variety of tissue changes can be brought about, which may be turned to account in the removal of abnormal conditions, and those who are not acquainted with the electrolytic effects of this current upon the living tissues, will be surprised to learn how wide is the range of its application as an alterative and curative agent.

The elimination of oxygen, chlorine and the mineral acids at the positive pole, by combining with the albuminoids in the adjacent tissues, cause coagulation, a drying and shrinking of the tissues in immediate contact with the electrode; hence we have an astringent, denutritive, sedative and hemostatic effect, with little or no eschar when the current is applied mildly and of short duration; at the negative pole on the contrary, where hydrogen and the alkalies accumulate, there is a softening and liquifying effect upon the adjacent tissues, and we have stimulation, congestion and relaxation of the parts.

With the positive pole we can cut off excessive blood supply to abnormal vascular growths, of whatever sort, be they hemorrhoids or hemorrhagic mucous membranes, and in fact almost any abnormal growth may be arrested, or removed by robbing it of its blood supply, and we have in this agent a simple and efficient means of bringing this about.

The softening and liquifying effect of negative electrolysis is especially serviceable in the removal of non-vascular, dense, horny or warty growths, and even cartilaginous and bony tissue; it is equally effective in the removal and absorption of cicatricial tissue resulting from burns, wounds and inflammations of various kinds, especially when this non-elastic, non-pliable tissue forms along the course of a duct or canal, which by forming dense unyielding bands or patches at one or more places, causes strictures of these canals. But in the removal of strictures, the surgeon must select a suitable electrode, and insulate it except at the point where action is desired, which is then introduced into the canal until it comes in contact with the constricting band, the anode (or positive pole) having previously been applied by means of a large pad electrode, well moistened, at some convenient place, as the breast, back, thigh or abdomen, and then the current carefully turned on, not to exceed five milliamperes; soon the alkalies (potash and soda) with hydrogen begin slowly to accumulate, and by cataphoresis and increased quantity of moisture is driven to the spot, by which combination of influences, the cicatricial band is softened, rendered lax and yielding, the capillaries and lymphatics are stimulated to take up the effusion and ultimately a degeneration of the fibrous tissue takes place and there results a complete removal of the growth; further when properly done there is left no eschar, nor is there any excess of tissue destruction beyond that which is desired.

The most important thing to be remembered is the directly opposite effects upon the tissues caused by the action of the anode and cathode when employed as the active electrode.

The polarity must always be chosen with due regard to the work to be done, and the nature of the tissue to be operated upon; for a large percentage of the failures of those who have attempted to use electrolysis in surgery, and who have abandoned and condemned it, results either from ignorance of its application or neglect of the physical, chemical and physiological effects of polarity in the use of it.

There is another physical effect of the constant current, which is capable of rendering much aid to the surgeon and that is, by this same cataphoric action, solutions of certain substances, such as cocaine, morphine, iodine, &c., placed upon the positive electrode, and brought in contact with the tissues, through the action of this current are made to traverse the tissues to a greater or less extent, depending upon the electromotive force and volume of the current, thereby inducing local medication and even general medication if so desired and the drug introduced in sufficient quantity, in this way local anæsthesia is induced or the parts prepared for surgical procedures.

By this means, also, effusions into joints and serous cavities, swellings resulting from bruises, sprains and inflammations are made to disappear and tumefaction subside. It is well to observe the effect of this current also in the treatment of ulcers, lupus, &c., and here the choice of polarity is most essential in producing the desired result; if

there is an exuberant granulation, or the sore is of the moist variety, the styptic astringent effect of the positive pole is indicated; if on the contrary, there is diminished nutrition, and an impoverished condition of the part, presenting a want of sufficient fluidity or serum, then the stimulating relaxing effect of the negative pole is indicated. This same process is equally applicable to disease deeply seated in the tissues, as chronic inflammatory conditions of the bones and ligaments, where nutrition is perverted and ordinary treatment of no avail, the stimulating effect of the negative pole is sometimes productive of great benefit.

Electro-tonic action results when the functional activity of the nerves is altered by being subjected to the action of this current; this functional activity, affecting the muscular system also, may be increased or diminished, according to the direction of the current, for instance, around the positive pole, the excitability is diminished, and an anodyne sedative effect is produced, while at the negative terminal, the opposite relation exists, and these effects are not confined to the immediate vicinity of the poles, but throughout the interpolar zone. To explain more fully, if the current traverses a nerve in the opposite direction to the nerve current, there is a diminished electro-tonic force, while if a current passes in the same direction as the nerve current the excitability is increased. The thermal effects of this current result from its efforts to overcome the resistance of the tissues which sometimes is immense, the skin in its dry state offers enormous resistance, and the greater the resistance, the greater the heat produced, hence it is necessary to reduce the resistance as much as possible, in order to obtain the desired result, and make the application bearable; to do this the skin should be kept moistened and the concentrated energy of the current distributed over a larger surface, by using a large wire gauze pad, well moistened with a saline solution, the greater the surface area covered, the more the resistance is diminished, and the stronger the current can be applied with less disagreeable effects. A lack of knowledge of these conditions, or a disregard of them, has been the cause of much unsatisfactory work in electro-therapy, on the part of the general practitioner, and has induced prejudice by the laity against its uses.

I will not enter into the details of its application, for it was my intention only in this paper, to define its physiological action and therapeutical properties.

We come now to speak of the faradic or interrupted induced current, its physical properties and therapeutical virtues. In order to understand its nature and comprehend its uses, one should have a knowledge of magnetism and the laws governing it. We are led to believe "magnetism to be some active condition of the ether, that is, one of the manifestations of energy in the space surrounding the magnet, known as the magnetic field; this energy in the magnetic field is not expended, exerts no influence and does no work unless the field is disturbed." It is a well known fact that a magnet is a body which has the property of attracting iron, steel and certain other metals, and when a bar of steel is rubbed by a magnet, it acquires magnetic properties and becomes endowed with polarity; so when suspended in the air, one end points to the north and is called the north pole, the other end to the south is called the south pole, now this bar becomes an artificial magnet and has the property of attracting unlike poles and repelling those of like polarity; near its center is a point where no magnetic force is visible, but cut into two or more pieces, each piece at once displays polarity. Steel is much harder to magnetise than iron and retains its magnetism longer, the softer the iron, the more easily it is magnetised, and consequently the more easily demagnetised; all magnets possess what is known as magnetic force or flux lines, which are assumed to pass out of the north pole, describe a circuit in a longitudinal direction to the magnet and pass in again at the south pole. These lines are more numerous and hence the magnetic influence more intense in close proximity to the poles, and if undisturbed they exert no energy except attraction and repulsion, but introduce a coil of wire within the magnetic field and at once by intersecting the flux lines, energy is developed and a current of electricity is induced, though only while the coil is in motion; then again when the coil is removed from the magnetic field, a current in the opposite direction is induced. This fact can be plainly demonstrated by placing a milliampere meter in the circuit and the needle will be seen to deviate in the opposite direction.

It has been proven also that if a bundle of soft iron wire be wrapped and insulated, and a coil of insulated wire be wound around this core, then a current of electricity passed through this coil, which is called the primary, at once the core becomes magnetised, is endowed with polarity and is, therefore, an electro-magnet.

It was upon this principle that the ordinary induction apparatus, or faradic coil was constructed. By referring to an apparatus of this kind, you will see that a vibrating spring rests upon the point of a screw which

projects from an upright post, so when the electric current is established through this point of contact, it circulates in the primary coil surrounding the core (or bundle of soft iron wire) and magnetises it; this magnet so formed, at once establishes a current in the opposite direction to the one which magnetises it, it also attracts the spring at the same time and breaks the current at the contact point, the current thus arrested causes the core at once to lose its magnetism, the spring is released and falls back upon the contact point when the current is re-established. This automatic make and break of the current alternately magnetises and demagnetises the core. Now if this electro-magnet be introduced into the centre of a secondary coil, it will act the same as a permanent magnet and induce a current in this secondary coil, and the instant it becomes demagnetised another current is induced in the opposite direction. Therefore this apparatus gives us an interrupted induced current, because the current in the secondary coil is induced entirely by virture of this coil intersecting the flux lines of this core or electro-magnet.

These two currents thus established are of unequal strength and volume however; the make current, or the one induced when the core becomes magnetised, is very much feebler than the break current (or the one induced when the core becomes demagnetised), the reason for which we will explain: When the core becomes magnetised a current is induced in the primary coil which immediately surrounds it, and there is another current induced in this coil in the opposite direction when the core becomes demagnetised. Now the current induced in this coil when the core becomes magnetised is in the *opposite direction* to the current flowing through it which produces magnetism in the core, hence it acts as a counter pressure and cuts down the force of the make current, or the one produced when contact is made at the vibrator, further a great part of the force of this make current is expended in magnetising the core. But the current induced in the primary coil when contact is broken (or the break current) is in the *same direction* as the current which magnetises the core and has no such counteracting force to oppose it, therefore it is readily seen that the two currents are of unequal strength, this difference, however, is not appreciable through the low resistance of the galvanometer, but when such resistance as the human body is placed in the current, it is at once manifest and appreciable, therefore, since we can only consider that current which produces an appreciable influence, it must be recognized as a current of one direction, and is necessarily endowed with polarity, since it is always in the same direction. It is estimated that the difference in the force of these two currents (the make and break as they are termed) is as 1 to 13; that is, the break current when the core is rendered magnetic, is 13 times stronger than the make current, or that established when contact is made.

The strength of the current in the secondary coil is in proportion to the number of lines of wire which is exposed to the magnetic influence of the core; in other words, if the secondary coil only partially covers the primary, the current induced is necessarily feebler than when it completely covers it. In that way we have a means of varying its strength.

We come now to consider the physical qualities of this current, viz.: Pressure and volume, and the therapeutical properties, mainly stimulation and sedation.

The stimulating property is in proportion to the volume which may be varied by changing the length and size of the wire in the secondary coil. If this coil is composed of a very long fine wire, there are, of course, a greater number of turns exposed to the magnetic influence of the core, which produces a current of high electro-motive force or pressure, therefore the pressure depends partly upon the number of lines of magnetic force intersected and partly upon the number of cells producing the primary current, but when this long fine wire is used, the resistance in the coil is greatly increased, therefore the amperage or volume of the resulting current is greatly reduced; so on the contrary, if the coil is composed of a short coarse wire, fewer lines of magnetic force are intersected, therefore the resistance is greatly diminished and there results a current of lower electro-motive force or pressure and greater amperage or volume.

Now in dealing with the human structures, where different bodies possess variable resistances, it is exceedingly important to select a current of suitable pressure to overcome the encountered resistance and produce a satisfactory and beneficial result.

Further, since these two properties of stimulation and sedation depend upon the qualities of pressure and volume, it is all important to possess an apparatus capable of producing these varieties as desired.

The cheap forms of faradic apparatus are comparatively worthless, because they are not constructed so as to make these variations possible.

One of the most important effects produced by this current is stimulation of increased tissue changes, that is increased absorption of oxygen and a corresponding in-

creased elimination of carbonic acid, therefore increased nutrition. There is also produced a stimulating effect upon the capillaries and lymphatics, and it is to this power that is attributed its ability to promote the rapid absorption of inflammatory exudates.

Sedation, perhaps the most important effect of these induced currents, is promptly brought about by the current of the long fine wire coil, and with it comes an anesthesia of the terminal nerve filaments, an obtunding of the nervous centres and relief from pain, while stimulation is produced by the coarse short wire coil; therefore a thorough understanding of the subject, and a knowledge of the different qualities and effects of these currents, is necessary for the attainment of satisfactory results, and unless these points are observed and the current properly employed, success cannot be expected. Hence with a proper appreciation of its virtues and uses, we have in electricity an agent for the cure of disease, which is destined in the future to take a prominent place in the armamentarium of many educated and scientific physicians in the land.

Pernicious Malarial Fever.*

By Dr. R. E. Zachary, Wilmington, N. C.

Certain departures from the ordinary types of malarial fever are termed pernicious because of their great tendency to inflict more than usual systemic danger and damage to life upon those who suffer such attacks.

The word pernicious is used in its common English sense of being hurtful or injurious. This disease is primarily due to the same poison which produces simple, intermittent attacks.

The extreme danger of the attacks and the awful suddenness with which they often occasion death form striking contrast with the more typical forms of malarial fever and appear fully to justify the use of the qualifying adjective, pernicious.

There are several types to be grouped under the term pernicious, which differ widely in their modes of inflicting injury, and these types are classed by many of the different authors as follows:

First—Algid or congestive form.
Second—The comotose form.
Third—The hemorrhagic form.

It is not within the scope of this paper to treat the subject of pernicious malaria in extenso, either as to its history, causation, or its different types.

*Read before the North Carolina Medical Society at Asheville, N. C.

Having had more experience with the comotose form, I will speak of that alone.

My object is to try to impress upon my hearers the awful suddenness with which this disease often causes death and the great necessity of immediate treatment.

The term comotose is applied to certain cases of pernicious malarial fever, because they present coma as a marked symptom. This disease is of frequent occurrence in the intensely malarious districts of Eastern North Carolina, in low, marshy localities along the rivers.

It seems to be limited almost to the laboring classes, especially to those working in lumbering mills along the river banks, in rice fields, and in low, marshy districts generally.

In my experience a continuous residence of from six months to two years in one of these intensely malarious districts, with frequent malarial attacks, will produce the condition in which we have pernicious malaria. Those drinking surface water seem to be the most liable.

The disease lasts from two to six days and if the greatest care is not taken it will end fatally.

Being connected for some time with the City Hospital of Wilmington, a charitable institution, I had ample means for the study of pernicious malaria, in its last stages, for it is a known fact that the poorer classes of people seek a hospital as a last resort, and many times the patient is given up to die before being brought to the hospital, and it is in the later stages that I had some success in treatment.

As the symptoms of this disease are familiar to most physicians, especially to those from Eastern Carolina, only a brief outline need be given.

Prodromic symptoms are usually present, the most common are irregular chills, dull pains over kidneys, and aching of all the extremities and a general tired feeling, bowels constipated, tongue badly coated, cold sensations. An attack may or may not be ushered in by a chill, but in its more serious forms the chill is a conspicuous feature, being severe and often rises to 105 deg. or 106 deg. F., then follows the most intense cerebral disturbance, a rapidly developing coma. The unconsciousness may persist for from twelve to twenty-four hours or the patient may sink and die. After regaining consciousness a second attack may come on and prove fatal.

The following report of a case goes to prove its fatality:

R. D., colored, male, age 22. an employee of Cape Fear Lumber Co., of Wilmington, N. C., on May 2d, 1899, left the mill sick,

was seized with a chill shortly after reaching home and became unconscious with a very high fever. A physician was not summoned until twenty-four hours later, when the patient was sent to the hospital, where he dies on the morning of May 4th. This is just the history of many cases.

The doctor is usually sent for too late. Out of ten cases of the comotose type of pernicious malaria brought to the Wilmington City Hospital during the summer of 1898, only one died, this one reached the Hospital late one evening and died early next morning.

The following is a report of one of the cases that recovered:

W. E., colored, male, age 42, was brought to the hospital June 12th, 1898. He had been living in a low, marshy district, had been having irregular chills and drinking surface water. He was stricken down with a chill June 11th, and the next morning was sent to the hospital, unconscious, and with temperature 105 deg. F. He was In a comotose condition, and by two reputable physicians was pronounced to be in a dying condition. Having diagnosed the case as pernicious malaria, and knowing the system to be full of malarial poison, I thought unusually large doses of quinine would bring the patient through, I nursed the case myself, not willing to trust him to a nurse. At twelve M. he was thought to be in a dying condition. At one o'clock P. M. I gave him, per rectum, sixty-five grains of quinine in solution. At six P. M. three oz. of rye whiskey in one pint of hot coffee per rectum, strychnine sulph., gr. 1-50, every two hours for six hours, hypodermically. Every hour the patient was sponged with alcohol and an ice cap kept to the head continually. The bowels were constipated, so at ten P. M. calomel, gr. 10, ext. colycinth comp., gr. 10, ext. hyascyamus, gr. 2, were placed on base of tongue and caused to be swallowed by tablespoonful of water trickeled over the powder.

At midnight, temperature had fallen to 100 deg. F., and patient conscious. At daylight he had a good action, and at breakfast time was able to sit erect in bed and drink a glass of milk. The quinine did not seem to effect the nerves of hearing. Grs. 10 of quinine was given him three times a day for three days, and on the fourth was discharged well.

The other cases were all treated in very much the same manner and with the same good results.

Patients suffering with pernicious malaria in the first stages were treated with gr. 10, doses of quinine every four hours, giving the same purgative as in the case related above.

Juvenile Criminals.‡

By Thos. F. Costner, M. D., Lincolnton, N. C.

I desire to present this subject to your consideration, not because I expect or can hope to offer anything new, but because of its great and ever increasing importance, both to this Association, and to the State and society at large.

Our State has taken on a new life, and is just now developing its material resources and increasing its wealth and population with wonderful strides. So much so, that we are attracting the attention of the hitherto older and more advanced and progressive States and peoples. Our civilization should keep step with our material progress. And nothing more surely marks the true index of morality and higher civilization than the attention paid by a people and by the public authorities to their poor and unfortunates, and to their criminals, those who must be restrained or reformed in order to protect society.

The medical profession has during the past decade made the greatest advances in its history, and has kept its place in the very van of the onward progress of civilization; in fact, has marked each step in that progress by some new discovery or device to alleviate man's sufferings and to prolong his days, or increase his usefulness in lire. We may justly feel a pride in the fact that we have almost invariably been the pioneers, who sounded the first note of warning and who led the fight for the great reforms in the laws for the benefit of humanity.

Our State has for many years neglected to properly look after and care for a large class of unfortunates, and the duty has again devolved on us to call the attention of the people to this, and to start a crusade, which with education and enlightenment, must eventually result in the enactment of more just and humane laws, for the treatment of the young class of criminals.

It is impossible to obtain any statistics regard to the matter of criminals belonging to the juvenile class in our own State, as none have been kept of this particular class; the statistics, like the criminals themselves, have been jumbled and thrown together in one bunch. But the information to be gathered from the 11th census, under the report on crime, Pauperism and Benevolence, and under the subdivision of

‡Read before the North Carolina Medical Society, Asheville, N. C.

Juvenile Criminals, as compared with the previous, or 10th census, shows us most assuredly that this class of young criminals is on the increase. Aside from the census, the very causes that produce and concentrate wealth among a few, increases the number of the poor, and the depths of poverty; and these last two results are in their turn the efficient and procuring causes of crime. If the class of criminals in general are on the increase, we may assume, that the juvenile shares in this increase. But we have only to look around us in our daily life or step inside the criminal Court room, to find how crime has infected the young, and how the number of this class is constantly increasing.

If we were permitted to study and trace the history and ancestry of many of these youthful criminals, we would probably find that in many instances, perhaps the majority, they themselves are not responsible morally, and ought not to be legally, for their first crimes.

Their crime is the result of a physical and mental organism handed down to them from a criminal or defective ancestry, perhaps accentuated and increased through many generations. They are defects, were so at birth, must remain so through life, and if no proper method of treatment or restraint is thrown around them, will transmit their defects to their posterity in all probability, with the increased interest accumulated during a life of vice and crime. They are crippled in the start of life's race, unable to cope with or resist the temptations with which their pathway is beset, and an easy prey to the Evil One. It may be the parent or some more remote ancestor, or a long line of ancestry were defectives, either vicious, a drunkard, an epileptic, or in some other form a defect. Such persons as these are no more responsible, and should no more, from a moral standpoint, be held accountable for their crime than you and I. And so far from meriting the condemnation of the law, and the felon's chains and clothes and cell; they deserve the pity and sympathey of all mankind, and they should receive from the better class of our people, that kind of treatment which will assist them to remedy the defects of nature and birth, and lead them towards higher and better ideals in life.

Our criminal laws, we are told, are based upon two cardinal ideas, punishment of the vicious law breakers, as an example to deter others, and reformation of the offender. I fear sometimes, we have almost entirely lost sight of the latter element, and proceed in the enactment of laws for punishment, and in inflicting and carrying it out solely on the idea of making an example of the offender; and even at times another element seems to enter into the execution of the criminal laws, an element that ought never to be allowed to enter the mind or heart of a judge in dispensing punishment to the unfortunates, the idea of revenge, or a punishment to recompense, as it were, the State or an individual, for the injury inflicted by the offender.

To punish the class of juvenile criminals above mentioned and referred to, for the purpose of making an example of them, is utterly wrong in principle, is absolutely inhumane and cruel, and in its result must necesarily and does end, not in reforming the criminal, but in making him worse. In dealing with juvenile offenders, we ought to have the single object in view of reforming the offender, and in the meantime restraining him from doing injury to society. He should be taken charge of upon the commission of his first offense, placed in the care and custody of those peculiarly fitted by skill and experience to study and deal with his defects; and every endeaver made, which skill can invent, or wealth and means provide, to remedy his defects, and to restore him to his place in society when, and only when, it is safe and prudent to do so. The strongest moral influences should surround him, while thus restrained; such a system of merits, rewards or compensation for industry, good behavior and improvement should be devised, as would quicken and develop and stimulate the better and higher moral and intellectual powers; powers, even among the criminals, are often only dormant, and need to be aroused and put in action, in order to engage the attention of the man or youth, and to drive out or tend to dispel, the vicious elements in his make up. It is unnecessary to say to any who have stopped to reflect on human nature, or who have observed it in their every day life, that there is hope of reforming even the older offenders, and there is great hope of changing and moulding the mind and even the heart of youthful criminals as to make of them useful and even valuable members of society. A wide field of usefulness, hitherto unoccupied in our State, is open along this line to those who wish

> "To soften the weight of adversity's touch
> On the faded cheek of their fellow-man."

Our treatment of this class of offenders is the very reverse of what it should be. Upon their first offense, in some instances, yes in many, when we take into consideration their surrounding environments, their antecedents, and their capabilities, when they hardly have an idea of society and no con-

ception of the law's demands, they are taken and confined in a jail, filled with older and more hardened criminals, reeking with filth and unwholesome and repulsive surroundings. In many instances they remain there until the court meets which will try them, or if they do not remain during this preliminary period, at the trial they are sent back there or to the penitentiary with similar surroundings. And when this same criminal in after years is called up before the same or some other bar of justice, for another or second offense, the fact that it is his second offense is laid to his charge; his punishment is increased because he did not reform; when in reality the State and the laws enacted by the governing powers have placed in his pathway every obstacle possible to his reformation, in the very method and manner of punishing him for his first offence.

Certainly no cause is more efficient or prolific source of crime than evil associations and companionship with the bad. Our English cousins have long since discovered this evil, and made provision to remedy it to some extent at least, by providing a separate sleeping apartment for each criminal, old or young, confined in their prisons or penal institutions. We ought to follow their example in this matter, and especially ought we to keep all young offenders, both during their confinement preliminary to their trial, and men under final sentence away from the vicious and criminal elements, and surround him with those influences and associates, which make for good, its influence extends beyond the conception of man, if for evil its blighting impress is likewise immeasurable.

According to the last Census report, twenty-five States and the District of Columbia had some means for caring for juvenile criminals, either such as were provided by law, or by individual charity. Perhaps the best known, as it is reputed to be the best managed institution of the kind, is the New York State Reformatory, at Elmira. We are reliably informed that the Superintendent of the institution is a man of the highest skill and qualifications for this kind of business; that the management of the institution is fortunately kept outside of politics and its influence, which is often so destructive to the progress and systematic development of such and similar institutions. The criminals who are sent there, are sent under an indefinite sentence, there being simply an extreme limit, that is they cannot be kept there beyond maximum time which they could be confined in prison, and they may be paroled or discharged at any time the officers of the institution under the regulations thereof deem it proper. Every inmate of the reformatory is made the subject of the most thorough study, the history of his life and of his ancestry as far back as can be traced is gone into, all his habits, his prejudices and his weaknesses are most carefully studied. He is surrounded with the best of influences, and his time and thoughts are occupied with such employments as are deemed best suited to correct the causes which lie at the foundation of his crime. A complete system of merits and of marking along every line, with the ultimate object in view of paroling and finally discharging him when he has attained the degree of perfection required by their rules and standards, and this hope and the rewards attending each onward and upward step are constantly before him as an inducement to progress and development. When he had attained the required degree of advancement he is first paroled, and a place found for him to obtain employment, but he is still under the surveillance and oversight of the institution and his history is carefully followed; if he goes to another town or city, the police are notified, and are required to keep trace of him and report regularly and constantly his progress. If he makes any, even a slight lapse, under the authority granted them by law, he is forthwith sent back to the Reformatory, and goes through a similar training. The reports show the most satisfactory results, and also show that the average time of confinement in this reformatory is considerably less than for like criminals in the ordinary prisons.

Viewed from the point of cost, the maintainance of this reformatory may seem rather expensive, but we will find it only seemingly so, when we look to the number of inmates. While we may not be able to induce our law-makers to start on so extensive a scale, it is time the start was made. It is a duty every good citizen owes to his more unfortunate fellow-creature; it is a duty our law-makers owe to their constituents and to the State and society, to establish in our borders such a reformatory.

One thought more I desire to suggest for the consideration of this body on the same subject, that is, how best to restrict and restrain the marriage of defectives and criminals, and the propagation of their defects. I see one of the Western States has recently enacted a law preventing and prohibiting altogether the marriage of defectives and criminals. Such a law is undoubtedly founded upon the highest wisdom, and will be of inestimable value to society, if it can be carried out. How to best enforce such laws, and how to make

them of practical utility, will doubtless require great time and patience, after such laws are once enacted; but before they can be enacted a great deal of educational work must be done.

Our situation and training places us in a peculiarly advantageous position to see the needs of the reforms, which I have briefly mentioned above. Our position and distribution throughout the whole country, and our contact with every class of people places us in a position to wield the greatest influence, in favor of those reforms, and in educating the masses of the people to their necessity. It is unnecessary to add,that with this peculiar knowledge and opportunity, a Higher Power has coupled and placed upon our profession the Duty of bending our united and individual efforts to the accomplishment of this great end.

An Interesting Case of Urinary Calculus.†

By M. Bolton, M. D., Rich Square, N. C.

Early on the morning of January 16th, 1899, I was hastily called four miles in the country to see Mr. A. W., a white man, who, the messenger stated, was suffering with colic. I found the patient suffering intensely with the usual symptoms of nephritic colic—sharp, lancinating pains in the right side, running down the course of the ureter, retraction of the testicle, severe grating sensation in the glans penis, almost constant desire to urinate, but voiding very little high colored urine, occasional efforts at vomiting, and rigid contraction of the abdominal muscles.

On inquiry, I found he had been suffering in this way since Sunday night (about thirty-six hours), the attack coming on abruptly. He had taken no medicine except a dose of patent purgative pills and a dose of castor oil, which had acted freely.

His side and abdomen were nearly blistered with hot water, turpentine and various liniments.

I proceeded to give morphia, gr. $\frac{1}{4}$, and atropia, gr. 1-150, hypodermically. In half an hour I gave, per orem, a tablet containacetanilid, gr. $3\frac{1}{2}$, soda, gr. 1, and caffiene, gr. $\frac{1}{2}$, with a quarter grain of morphia. This had the effect of quieting him temporarily, but made him slightly delirious.

Patient's age was fifty-three years, average weight one hundred and fifty pounds; married, family history good, farmer by occupation. Had always been healthy, never having been visited by a physician professionally.

He attributed his attack to some heavy work in which he had been engaged during the past two or three weeks—that of hauling railroad cross-ties. He stated, however, that he had suffered some dull, deep-seated pain in that side, at times, for a year or two and while he had been practically well he had found that he could not carry any heavy weight on the arm pressing against that side. He referred to it as his weak side.

There was no history of any acute renal or hepatic colic.

I diagnosed it a case of nephritic colic, left a few quarter grain morphine granules and an equal number of lapactic pills, with instructions to give one of each as necessary to control his pain, and to report to me the next day if he was not relieved or if he was relieved sufficiently to report in person a day or two later. I did not hear from him until Saturday morning, January 20th, when I was again sent for to see him. I found him suffering in the same way, but not so severely. He had only taken two or three doses of the pills since my first visit (four days previously), his wife giving as the reason that they made him so crazy she could not manage him.

His abdomen was decidedly tympanitic, and bowels constipated, not having acted since my first visit. Temperature 101, pulse full and slightly accelerated, tongue flabby and thickly coated, slight nausea, but no vomiting.

I gave a two quart hot saline enema, which brought away considerable gas and fecal accumulations.

The pain was more diffused, and the abdomen was so sensative to pressure, I was not able to make a very careful examination of it. I left eight tablet trituates of calomel, $\frac{1}{5}$ gr., soda, 1 gr., and ipecac, 1-10 gr., each, one to be given every hour and followed in two hours by half an ounce of epsom salts. I left also a solution of morphia and hyoscyamus, which I disguised as much as possible, and ordered it given as indicated.

The next day, Sunday afternoon, his temperature was 102, pulse 90; still suffering pain, but the character of the pain had gradually changed. It had lost, largely, its intermittent or paroxysmal character, and was general over the side and abdomen, though the tenderness was more marked in the right side. His bowels had been moved several times and were distended. He was passing very little urine, but the desire was less persistent. I left some three grain Dover's powder tablets to be given to control his bowels and to quiet him. There

†Read before the North Carolina Medical Society at Asheville, N. C.

having been a history of malaria in his case a few weeks previously, I thought possibly that had something to do with keeping the fever, so I prescribed twenty grains of quinine to be given next morning, five grains to be given every two hours, beginning at 6 o'clock.

Monday afternoon his temperature was 102, pulse 90 to 96; bowels still more distended and acting every three to four hours. Discharges consisted largely of bile and mucous, with considerable tenesmus with every movement; the odor was more or less offensive. The pain was almost entirely relieved except on pressure. He expressed himself as feeling a great deal better, and attributed his supposed improvement to the little brown tablets, of which he had taken only three or four. He had been quiet during the past twenty-four hours, but was delirious—talking and pulling at the cover when left to himself. There was no nausea, but the anorexia which had existed from the first had developed into a disgust for every kind of food; patient losing flesh and strength rapidly. I prescribed salol, gr. 5, and strychnine, gr. 1-60, every four hours, and left a few tablets of opium, camphor, rheubarb and capsicum to be given as necessary to restrain the movements of his bowels.

From this date the case ran on for twelve or thirteen days with very little variation in the symptoms except progressive emaciation. His temperature varied from 100 in the mornings to 103 in the evenings. Pulse 90 to 100; skin hot and dry. Bowels continued irritable, acting several times every day. Stools consisted of semi-liquid bilious matter and mucous; general distension of the abdomen; no pain except on pressure. I was not able to make out any localized induration at any time, but this was rendered impossible by the extreme sensitiveness.

He gradually began to pass more urine from Monday, the ninth day of his illness. There was nothing characteristic of it on inspection until Tuesday, the tenth day, when I discovered a suspicious looking sediment in it. I took a sample home with me, and on examination it proved to be pus. I could, doubtless, have found it earlier had I examined for it, which I should have done. From that time there began to be a free discharge of purulent urine, though the bladder was retentive and he did not have to pass urine oftener than when well.

Typhoid symptoms continued unabated. Patient lay constantly on his back and slept nearly all the time, muttering and twitching frequently. The treatment was salol, gr. 5, every four hours, and turpentine, 10 drops, every four hours, alternately One of these remedies was given forty-eight hours at a time when it was discontinued, and the other given. He took 20 grains of Royal Pepsin Co., 20 gr. bismuth sub-nitrate, and 1-60 gr. strychnine four times daily. Diet consisted of milk, egg drams and liquid peptonoids, with a little chicken broth occasionally. I saw him once every day except two or three days when the weather was so inclement it was next to impossible to get there.

About the eighteenth day of his illness he began to have night sweats.

On Thursday afternoon (nineteenth day) I noticed an undue fullness in the right hypochondriac region, but having no idea that an abscess was forming in that position, I was not satisfied as to the nature of it. On Friday afternoon it was more prominent, and I thought I could make out slight fluctuation; but the general distension of the abdomen and tenderness on pressure, made it impossible to make a rigid examination.

I inserted my hypodermic needle deep down through the most prominent part of the enlargement and drew out a syringeful of pus. I could not discover any odor of urine or appearance of bile in the sample of pus. I suggested an operation, and was directed to exercise my judgment and do whatever I thought best.

Dr. Joyner, of Woodland, was sent for to meet me next morning at 10 o'clock. We both arrived on time and examined the case together. There was no longer any question as to the presence of pus, but as to its cause and source there was a cloud of doubt. The site of the abscess settled the question as to appendicitis or nephritic abscess—as we thought. While there was pyuria it was certainly most improbable that an abscess in that region would be draining through the ureter.

We concluded that the symptoms of kidney colic which played such a prominent part in the early history of the attack were reflex or possibly there was a coincident nephritic colic.

We had a most unpromising patient for operation—pale, weak, emaciated. It was uncertain as to what extent the operation might have to be carried. We decided to do the best we could under the unfavorable circumstances, and acting upon that surgical law which is now generally respected—to let out pus wherever found—we placed the patient on a table, disinfected the surface, and commenced the administration of ether. He did not take the ether well and we changed to chloroform. Respirations and pulse became alarming, and both had

to be discontinued before he was thoroughly anesthetised. I proceeded to make an incision about two inches or more in length, corresponding with the course of the rectus muscle and at the place where I had made the exploratory puncture with the needle; which was in the right hypochondriac region, in close proximity to the gall bladder, immediately beneath the cartilage of the lower ribs. Two pints or more of ordinary pus escaped. On exploration with the finger the pus was found to be perfectly encysted and the abscess cavity contained a calculus of considerable size. It was rather an agglutination of four or five distinct calculi projecting in different directions and weighing about sixty grains when first extirpated.

The cavity was irrigated with a bichloride solution, 1 to 2000, a rubber tube inserted, and the wound dressed with iodoform gauze and absorbent cotton. Patient was replaced in bed, hot applications applied and stimulants administered.

It was with great difficulty reaction was established. For six or eight hours his condition was critical. The following morning he had less fever, but there was no change in the character of his urine or the condition of his bowels. There was undigested milk in the feces, but he had taken an excessive quantity. The abscess cavity was again irrigated, but I could not wash it out satisfactorily. He began to improve from that date—was clear of fever in a few days, tongue cleaned off, appetite improved, tympany subsided, and bowels became regular or rather constipated. After the fever had gone off, I gave him syr. hypophosphite comp. in full doses three times a day before meals, and five grains of salol between meals and at bed time, alternating every forty-eight hours with turpentine, ten drops at the same hours.

The evacuation of the abdominal abscess did not seem to have any effect on the pyuria at the time of operation, nor has the amount discharged from it since, borne any relation to that from the kidney.

There was considerable pus in his urine (though varying in quantity) until about the first of April, since which date there has been only a trace. The abdominal abscess still continues to discharge freely. I have experienced great difficulty in keeping it open.

He has had a voracious appetite and perfect digestion, and has about regained his usual weight, though he is still weak, and while he can do no manual labor, he has been able to attend to his business for about two months. During the past two and a half months he has taken tonics, lithiated hydrangea, and calcium sulphide at different times, leaving off all medicine for a week or more from time to time.

Now, Mr. President and gentlemen, it may be that I have consumed an unnecessary amount of the valuable time of this Convention in reporting this case, but my only excuse is that to me it is a most interesting and unique one. Dr. Joyner and I were of the opinion that it was a biliary calculus. To settle the question as to the nature and source, I sent it to the Editors of the Charlotte Medical Journal to be examined, and it was turned over to Dr. Pressly, the Secretary of this Society, for analysis. It proved to be a renal gravel.

I can not understand how so large a multangular calculus could find its way contrary to the laws of gravity to that position in the abdominal cavity.

There evidently existed in this case a suppurating track from the pelvis of the kidney or upper dilated portion of the ureter to and beyond the site of the gravel divided by inflammatory adhesions into two distinct abscess cavities; one discharging through the ureter and the other through the external opening. I saw the patient the day before I left home, and the discharge of pus from the external opening is greatly reduced in quantity and there exists the slightest trace of it in his urine. He is much improved in every way, and I believe will get well.

Gun-Shot Wounds--With Report of a Case of Gun-Shot Wound of Stomach.*

By Dr. R. E. Zachary, of Wilmington, N. C.

Being resident physician of the Wilmington City Hospital at the time of the well-known race riot, in November, 1898, opportunity was given me for the study of gun-shot wounds of most every description.

Nov. 10, 1898, fourteen wounded men, two whites and twelve colored, were admitted to the hospital. It may be a singular coincidence that all except the two white were shot in the back, one of them being wounded in the bottom of the foot. All recovered except two colored men, who died shortly after being admitted. Of the twelve who recovered only two were seriously hurt. The lungs of these two were pierced, most of the rest were flesh wounds, no bones were broken.

Bullets were probed for and most of them extracted, counter drainage formed. when-

*Read before the North Carolina Medical Society, Asheville, N. C.

ever possible. The wounds all were washed daily with hydrogen peroxide and left open, with the exception of plain gauze dipped in a bichloride solution 1-5000 and applied. This treatment was successful and twelve of the fourteen will perhaps live to tell their grandchildren of their experience in the famous Wilmington race riot, how bravely they stood up and faced the enemy.

The following is a report of on accident gunshot wound of the stomach and treat ment: G. F. White, age 15, male, shot himself accidentally Jan. 25th, 1899.

After eating an unusually hearty dinner he went to his room for the purpose of cleaning his pistol, a No. 32, after which he reloaded it and holding it directly in front of him about on a level with his chin and attempting to close it, it fired, the bullet entering his body two and one-half inches below and to the left of xyphoid cartilage and lodged in the muscle one inch to the left of spine and just above crest of ilium. I reached the patient about one hour after the accident occurred and found him suffering from shock, countenance pale, pulse rapid and weak, lips blue. Morphia, atropia and strychina were given at once, hypodermically. The patient had just vomited between one quart and one-half gallon of food and blood mixed. A second time he vomited almost pure blood, the third time there was only a trace of blood and the fourth time no blood at all. Several physicians were called in for consultation, most of whom were in favor of opening the abdomen and exploring. Would such a precedure have been advisble?

As I stated before, the patient was suffering from shock and had an operation been advisable the subject was too weak to bear it. What stopped the hemorrhage?

As stated in the beginning, the boy had just eaten an uusually large dinner and the stomach was distended. After the bullet had passed through and the hemorrhage begun, patient vomited, emptying the stomach of its contents, giving it an opportunity to contract, and it is reasonable to suppose that after this contraction the hemorrhage ceased.

In less than three hours after the accident patient had passage without a sign of blood, so it is natural to suppose that there was no wound further along the bowels than the stomach. Patient urinated as usual, so the kidneys, bladder, ureters must have been untouched. There was no sign of injury to the patient except that of the stomach, and hemorrhage from this wound had ceased, but leaving patient in a weak condition, and thinking an operation not advisable the following was the treatment: The bullet, which was only about two inches from the surface, was extracted, giving excellent drainage to the wound at both ends. Both wounds were left open and only a bichloride dressing used. Now there were two wounds in the stomach and in order to prevent hemorrhage, nothing was allowed to go into it. To give the wound a chance to heal there must be perfect rest of stomach for at least three weeks or one month, so for three long weeks not one thing, not even water, was allowed to go down his throat. All nourishment and medicines were given him externally and per rectum. Knowing it to be a very difficult case, I did the nursing and was with him almost constantly the first seven days ond during this time his temperature ranged between 101 deg. and 105 deg. F. For the first three days he was given an ice bath every hour, after which he was sponged in alcohol and after this when bis temperature exceeded 102 deg. F. he was bathed and sponged until temperature fell below 102 deg. F. For one month an ice bag was kept constantly to his abdomen. milk, warm coffee and whiskey were given per rectum every three or four hours. He would retain about three pints of milk and four to eight oz. of whiskey daily.

Strychnine gr. 1-50 was given hypodermicaliy, three or four times a day, mouth mopped thoroughly every two or three hours with mixture of listerine glycerine and water. Morphine, whenever required, was given for pain. During the period that his temperature was so high the patient was unconscious. On the twenty-first day patient was allowed to have one table-spoonful liquid peptonoids every four hours per mouth and at the end of one month was given milk freely, but was not digested, so this was stopped. In a few days he was given Mellin's food and seemed to thrive on it. Even the most digestible food would cause pain in the stomach, so it was necessary to be very careful. After about the fourteenth day patient began to improve. When the accident occurred he weighed 145 pounds, but he got down to less than 90 pounds and improved very slowly, was not able to leave his bed for three months from the time of the injury, but now he is well and hearty and doing good work.

The need of a scientific test of death has suggested the use of Roentgen rays, as the slightest movement of the heart blurs the skiagraph, and in Paris they have already been successfully used for this purpose.

Some Remarks Upon Coley's Treatment of Malignant Growths.†

By Frank T. Meriwether, M. D., U. S. A., Retired, Asheville, N. C.

I wish to preface my remarks upon this subject by stating that I do not in any sense recommend this treatment in cases in which the tumors are operable, even though operation requires total removal of limbs or destruction of function in all cases, when operable, and when consent can be obtained, do the most radical operation possible.

I will confine my remarks more especially to the effects of this treatment upon Sarcoma, for true Carcinoma have not given very good results, though in some cases benefit has resulted.

It has long been known that accidental attacks of Erysipelas arrested, and in some instances cured,not only malinnant growths but also malignant ulcerations, Lupus and syphilitic erosions. Moullin[1] identified 15 undoubted cases of Sarcoma ,in which Erysipelas occurred, 9 of which were cured and 5 benefitted. Billroth, Busch, Beidert, Coley, Fehleissen, Wyeth, Winslow, Répin,[2] and others, also report cases in which cures or benefits have been obtained in like manner. Fehleissen produced artificial Erysipelas in cases of malignant growths, and obtained a cure in a case of Carcinoma of the breast,and benefit in two cases of Sarcoma, and two of Carcinoma. I have the personal report of a case of Sarcoma of the Parotid Gland and Jaw treated by Drs. Lewis and McIntyre, of Kansas, in which facial Erysipelas caused the apparent cure of the primary growth. A metastasis occurred afterwards in the Tibia which was treated with success with Toxin injections. Attempts have been made to inoculate cases with the pure culture and then with the toxin products of the germ alone, after sterilization. Coley also used the Bouillon cultures after sterilization, but like Brieger Lossen and others, did not accomplish much in the way of good. Coley finally made use of the discovery of Roger, of Paris,that the addition of a non-pathogenic microorganism, the Bacillus Prodigiosus, added to the Streptococci of Erysipelas increased materially their virulence.

His method of preparing the Toxin is as follows: Flasks containing 50 to 100 c. c. of peptionized bouillon, after proper sterilization, are inoculated with the streptococci of Erysipelas, which are allowed to grow for three weeks at a temperature of 30 to 35 C. The flasks are then inoculated with the bacillus prodigiosus and kept at the room temperature for ten or twelve days. Then after being well shaken the cultures are poured into sterilized half ounce bottles and heated to a temperature of 50 to 60 C. for an hour, which makes them perfectly sterile. After cooling, a small amount of powdered Thymol is added and the Toxins are then ready for use. If they are too strong for use the preparation may be diluted with either distilled water or glycerine.

To make the bouillon, soak a pound of chopped lean meat over night in water. The next morning strain it through a cloth, make it up to 1000 c. c. and boil for one hour. Then filter through a cloth, add peptone and salt, neutralize, and boil again for an hour. Pass this through filter paper and put into the flasks. It is not always necessary to neutralize the bouillon, as the streptococci are, if anything, stronger when grown upon an acid preparation and they grow as readily.

To keep up the virulence of the cultures, Coley puts through rabbits as follows: A minute quantity of a bouillon culture is injected into a rabbit's ear, which has been been cleansed by having the hair clipped and the ear then washed with a weak carbolic solution and then with sterile water. Forty-eight hours afterwards, after washing the ear again, a flat sterile needle is introduced under the skin near the point of inoculation and the layer of skin cut off. An agar tube is then inoculated with this skin aud placed in an incubator. Twenty-four hour later the colonies may be seen as minute white specks, and from them a pure culture may be obtained. If the agar is made with 75% of bouillon and 25% of urine the streptococci will grow more freely.

Technique.—The treatment should be commenced with a dosage of one-half a minim, repeated every two or three days, according to the strength of the patient,and the effect of the injections. In some cases one-third of a minim is not too small. In many cases, particularly those in which the tumor is very vascular, even this small dose will produce a marked chill and reaction. In a case seen with Dr. Weaver, of this city, we never did get above three-fourths of a minim, and our usual dose was about one-half, and yet this smlll dose produced, at times, marked chills and depression. If the patient does not show the effects of the injections, increase the dose gradually until the temperature goes up to 102 ar 103 F. A slight chill almost always accompanies

†Read before the North Carolina Medical Society at Asheville, N. C.

1Fowler's article in Am. Journal Med·Science vol. cxvi, pages 161 et al.

2Ibid.

this temperature. though it should be avoided if possible. Give enough to stop just short of the chill, and very little depression follows the subsidence of the temperature. The chill or chilly sensation usually comes on within a half to one hour after the injection. Strychnia or whiskey should be given if much depression or rigor follow. Usually within two or three weeks the effects of the injections can be determined, whether or not benefit will result. In some cases, however, progress is slow, and require a more or less prolonged treatment; in one case reported the treatment being continued for two years before the patient could be said to be well.

If too much time elapses between the injections the growth returns to its former activity. The toxin does not seem to have a permanent effect upon the tumor mass, for after three or four days its inhibitory and destructive power disappears and the cells commence again to proliferate. To obtain the proper dilution, use plain sterilized water.

If the injection is given at some distance from the tumor, sometimes as much as ten minims may be tolerated, but where possible always inject into the tumor itself, for the best effects are and have been obtained when the injection has been made into the tumor mass, and a smaller dose can be used and its effect is shown much more rapidly, and can thereby be the better controlled.

In a case I saw, ten minims would not produce a chill when given in the abdomen at some distance from the tumor, it being a carcinoma of the abdominal wall, recurring after the removal of a large cyst-adenoma, of the ovary, while two minims injected into the mass itself would produce a marked chill and profound depression with cyanosis, pulse of 140 to 160, followed by a temperature of 104 F.

Mode of Action.—The exact rationale of the action of the Toxins upon these growths is as yet uncertain. Coley seems to think that it depends upon a bactericidal action, but so far the bacterial origin of sarcoma has not been demonstrated. The toxins seem to have an elective affinity for the cells of the neoplasm, for even if the injection is given at some distance from the growth the selective action of the toxin is manifested. In the cases where sloughing and necrosis occurs, it shows itself usually within thirty-six to forty-eight hours. In one case of mine, sloughing of the tumor mass was freqnently noticed within twenty-four hours, and the effect upon the metastases was noticeable within almost as short a time, though at quite a distance removed from the primary tumor. This necrosis, as Coley points out, is not dependent upon the action of the toxins upon the tissues in a manner similar to that of an escharotic, but is dependent upon some special selection for the neoplastic cells or their cause. In a case of mine, of small round cell sarcoma, the sloughing would always occur at a point some distance removed from the place of injection, and in another case in which the tumor was deep seated, the injections were given under the skin over the site of the tumor, and while the specific action of the toxins was shown, no local slough occurred. The tumor itself seemed to be softened, and finally was absorbed, most probably a form of fatty degeneration.

Results.—Though unable to explain fully its favorable action upon malignant growths, and particularly upon spindle celled sarcoma, the fact remains that a good percentage of cases treated have been benefitted or cured. I have collected from various sources 216 cases of sarcoma treated. I do not think that these can represent all the cases treated in this country, for 148 of them are personal cases of Coley's, but I judge that they give a fair basis from which to form conclusions. In not all of them was a microscopical examination made, but the clinical diagnosis, when made, were considered sufficient, and were made by able men. Of these 216 cases 57, or 26½ per cent., were cured; 93, or 43 per cent., were benefitted to a greater or less degree; and 3 died. Of the spindle celled sarcoma diagnosed by the microscope, all were benefitted and 60 per cent. were cured. Coley reports a case of epithelioma cured, and I learn from other sources of two cases of carcinoma, type unknown, cured, and three cases benefitted. One of my cases was a malignant adeno-carcinoma of the ovary, in which the patient was benefitted, but owing to objections on her part, and other obstacles, the treatment could not be carried out as it should have been.

The fact that in a great many of the cases the treatment was commenced late in the disease, when death was imminent, lessens the favorable appearance of the statistics. By leaving out those cases in which death ensued within two weeks, the percentage of cures is much greater. Undoubtedly many cases have been treated without success, which have not been reported, but even if 57 out of a large number have been cured, the treatment should in the proper cases be considered to be upon a firm basis. Of course the only way to arrive at positive conclusions is to consider all cases whether favorable or not. It would be well if all the cases, particularly the unsuccessful ones,

were reported, from which a comparison could be made.

There have been many objections made to this treatment, one on the ground that mistakes have been made in the diagnosis of those cases said to have been cured. It is possible that error might have occurred in those cases in which no microscopical examination was made, and where the diagnosis was made upon the clinical features alone, but in the greater percentages of the cases benefitted or cured, accurate microscopical examination has been made.

Welch says that "microscopically, spindle celled sarcoma cannot be confounded with anything else, though the round celled sarcoma might be with syphilitic gumma." But it so happens that it is in the spindle celled form that the greatest good comes.

In Battle's[1] case, reported before the Medical Society of London, in which, after this treatment, an enormous fibro-sarcoma of the clavicle and shoulder had nearly entirely disappeared. Moullin stated that "he had examined both the tumor and the sections made from it and considered it a sarcoma."

Another point that has been raised is that frequently tumors, some of them said to be sarcomatous, have disappeared spontaneously. Wyeth and McCosh[2] each report a case in which, after pyogenic infection and suppuration, the tumors disappeared, but Bland Sutton[3], before the Royal Gynecological Society of London, said "that he did not believe in the spontaneous disappearance of any connective tissue or cancerous growths, in no case has the diagnosis been proven by microscopical examination."

Another objection has been to its supposed danger. In only three cases so far as I can learn, has death ensued, due directly to the injection. Two of these occurred from pyogenic infection, and the other from shock.

A. Marmaduke Shield[4] reports a case in which the growth showed shrinkage, but in which the patient died from general pyemia, which he thought due to the injection. In the secondary abscesses found post mortem staphylococci aureus. The toxin being made from the streptococci and then sterilized could not have contained the staphylococci, but they must have been forced into the circulation from the surface of the tumor, which was a sloughing one, or else the injection was not an aseptic one. Moullin also had a case to die, in which the conditions were the same. In both of the cases the fluid was proven to be sterile, and the greatest care was said to have been exercised in preventing infection.

Fatalities may be prevented by properly graduating the dose and by care in injecting the cases, particularly the suppurating ones.

At all events, admitting that it is dangerous, and that only a limited number of cases of true sarcoma have been cured, a hypothesis which I do not believe, the miraculous results that have been obtained in this absolutely fatal disease, justifies any measure, not in itself directly destructive to life.

1Medical News, 12, 24. 1898.

2Annals of Surgery, Vol. XXV., page 175-176.

4Ibid.

4Am. Journal of Med. Sciences, Vol. CXIII, page 726.

Propagation of Typhoid Fever and Other Infectious Diseases.*

By G. A. Ramsaur, China Grove, N. C.

When my friend Dr. Costner, the chairman of this section, asked me to write a paper, I was in a quandary what subject to select, but the one just read has given me so much anxiety and thought, I at last decided to make it the basis for a few remarks, hoping thereby to provoke a lively discussion, nevertheless I fail to give much light on the subject.

The propagation of infectious diseases as typhoid fever, yellow fever, dysentery and malaria is of vital interest and importance to every practitioner of medicine.

In the province of prophylaxsis the earnest and skillful physician can save more suffering and expenditure of money, and confer greater boons upon afflicted mankind than in his efforts to cure disease.

When our grand old science becomes so enlightened that she knows just what methods and means to apply to jugulate the dread infectious diseases, she will have conferred the greatest good upon man, and should be called blessed.

It is a fact too well established to be controverted that typhoid fever and other infectious diseases, malaria included, are water-borne under certain circumstances.

I wish to premise, at this point, that these diseases are also fly-borne in their propagation under favorable circumstances.

I wish to speak, more particularly, as to the conveyance of infectious intestinal diseases, as typhoid fever and dysentery, in this paper.

From recent observations I have concluded that typhoid fever in small towns, is fly-borne.

*Read before the North Carolina Medical Society at Asheville, N. C.

The sewerage in cities with closed sinks and closets, where the excrement is deposited and at once washed away, affording little or no opportunity for access and contact with flies is necessarily water-borne.

On the contrary typhoid fever in villages with open sinks and closets visited by myriads of flies carrying away the germs on their feet to the accessible dining rooms and kitchens and depositing them on the bread and meat and in the milk and water is, under the circumstances, fly-borne.

Again, typhoid fever prevails in cities,at any season and from time to time throughout the year, provided the germs remain active at all temperatures. While in villages, its ravages are autumnal and most extensive during the hotter, drier months, conditions most favorable to propagation by flies, disappearing when the colder weather comes on, putting an end to the migrations of these filth conveyors.

The importance of flies in the spread of these diseases, I believe has been misunderstood, overlooked and unappreciated.

Contrary to views that are held and promulgated as the usual methods of propagations of infectious intestinal diseases it is now clear to my mind that they are spread in small towns and rural districts almost exclusively by flies, and malarial diseases by water.

Since passing through the epidemic at China Grove last summer and fall, I am more than ever convinced of this fact. I at first attributed the propagation to the system of the cotton mills, around which the fever was prevalent, the method of drainage, if such it can be termed, being cesspools, which I fully believed had infected the wells. If the disease was water-borne from infected wells by cesspools, then the whole hill was saturated, for there was fever in every quarter and around every well, beginnimg on the east side of the rail road and ending on the west. I do not think it possible these six or eight wells were all infected or even probable that any of them were the source of propagation in this epidemic, for there are private wells on the grounds and no fever prevailed in any of these families; and if due to infected wells, why did hoar frost curtail the epidemic ?

I do not want to leave the impressions for a moment, I am defending the system of sewerage, for I regard it the most damnable and unconscionable method and practises, and it is only a question of time when the hill will be saturated, and then the fever will be more far reaching and lasting than if fly-borne.

As I stated above, this epidemic began on the east side of the rail road about the first of June, being confined to one house and only one case. The next cases were in an adjacent house and it spread from house to house until six or seven families in this neighborhood had fever, who drank water from three different wells. Moreover, there were fiive or six families in this neighborhood who used the same water and who escaped infection. If water-borne, then all these wells were certainly infected,but how can we account for the escape of the other families who drank the same water. It is not possible they all had sufficient resisting power to overcome a dose of germ from day to day, and is it not more probable and plausable that flies carried the germs from house to house infecting the water and food, and when they ceased to be a factor in the cause or relation the epidemic suddenly ceased? The disease spread from the east side of railroad to the west side and every street had its quoto of cases. The streets all run parallel, the back part of lots lying adjacent, rendering the kitchens and dining rooms of adjoining residences more exposed to flies that inhabit neighboriug infected privies.

Some years ago, I remember a family living near by a free school house had typhoid fever; and the nurses, not being properly instructed by the doctor, infecfed the well by rinsing the chamber and throwing the water about the well to be washed into it with the surface water. The school drank from this well, there being no well on school grounds. Typhoid fever prevailed in all the families that lived in this district and patronized the school. The epidemic continued throughout the winter, family after family and member after member falling victims until the school was suspended because there were no scholars. This is a plain case of water-borne infection.

The epidemic that has been devastating Philadelphia, the past winter, beginning during mid-winter and continuing until the last of March, 1899, five thousand had become victims and five hundred had succumbed, is in marked contrast to epidemics in small towns with diverse water supply. "When flies are responsible there are little neighborhood epidemics, extending in short leaps, from house to house without reference to water supply or anything else in common," as in some of the families at China Grove who are entirely isolated and who did not have their water and so forth in common as was the case in other families. But when water supply is at fault, as it was in Philadelphia, the disease follows its course and use "the only limitation be-

ing the resisting power of individuals drinking it and such household means as boiling and the like as tend to destroy disease germs."

Dr. M. A. Veeder, of Lyon, N. Y., who has made investigations in regard to conveyance of germs by flies, says: "Epidemics spreads by flies tend to follow the direction of prevailing warm winds as though the fly, wandering out doors after contact with some source of infection, had drifted with the wind but nothing of the sort is perceptible in the case of water-borne disease." The result of his investigations as health officer and physician during the sojourn of our troops last summer is summed up thus: "In villages and camps where shallow open closets are in use giving access to flies to the chief sources of infection, flies form the chief medium of its conveyance. Hence in villages and camps they are usually fly-borne."

Dr. Veeder states in a paper read before the Buffalo Sanitary Club in December, 1898, that he cut short a grave epidemic of dysentery in its height there having been forty cases and ten deaths, and rapidly spreading from house to house without the occurrence of a single new case after the proper means of disinfection had been instituted as would make conveyance by flies impossible. "In like manner the past summer a live epidemic of typhoid fever was ended in a day by means directed at conveyance by flies;" so, too, he cites instances, where malarial fevers subsided without the use of quinine by means directed against conveyance by water.

Take for illustration a case of typhoid fever in its prodrominal stage that is not confined to bed, and, while lingering around deposits the excrement in an open closet where, on a hot day, the dejections all literally covered with flies and the doors and windows of adjacent house, leading into kitchens, pantries, and dining rooms, is it too much to presume that a microscope would reveal fly tracks of more or less fresh excrement doubtless containing the Colon Bacillus and Bacillus of Eberth on meat, bread, sugar, etc? Is it unreasonable to contend a single case of typhoid fever would start a severe local epidemic under such circumstances?

Dr. Veeder asserts that he has made cultures of bacteria from fly tracks and, also, from the excrement of flies while acting as health officer in the army.

Asepsis and Antisepsis are the sheet anchors in subjugating the forces of infectious diseases. "Cleanliness is next to godliness" and with scrupulousness in regard to room, patient, linen, etc., and through disinfection of the stools and their prompt removal the danger of a spread of disease is reduced to a minimum.

The greatest difficulty to surmount in these factory districts where laziness and filthiness is the rule, is to enforce your instructions in this regard. For this reason I was not succesiful in jugulating the epidedemic at China Grove last summer, but was able to limit its ravages in families who were faithful in performing their part in the work. It is of paramount importance to thoroughly disinfect the excreta before they are removed to closet, etc.

I feel sure, if the rules of Asepsis and Antisepsis are rigidly enforced in every detail, the physician is master of the situation and can curtail these diseases in small towns.

DISCUSSION.

Dr. E. B. Glenn.—Dr. Ramsaur paper was very interesting, and along a line of thought I have been giving a little study for the past few weeks in the Jefferson Hospital Laboratories in Philadelphia, and have some very interesting plates showing that the fly can carry typhoid fever. Of course it is not new that the fly can carry typhoid, but I do not know of any one who has tried any experiment as to the length of time it can carry it, so I determined to make some experiments, with the aid of Dr. Rosenberger of Philadelphia. We found it very difficult to get any flies at that season of the year, so I sent to Florida and had a lot of bed-bugs, cock-roaches and flies sent to me. I took the flies to the laboratory in a mouse jar. There I cut the flies wings so that they could not get away. The fly was placed in this jar after it had been placed on a culture of the typhoid fever bacilli. In half an hour he was allowed to walk over an agar plate, and there with his feet inoculate the medium with typhoid bacilli. Of course it was a mixed infection, on account of the fly carrying other organisms naturally found on its feet. The fly was allowed to walk on the media for half a minute. Then he was placed back in the mouse jar. The next day he was placed on another Petri dish spread with agar. Those where the wings were pulled out and those which had a leg broken lived but a little while, but the flies which were well taken care of lived commonly 48 hours. The bed-bug and the cock-roach lived much longer. I do not know what caused the death of the fly, but I was able to demonstrate that the cock-roach carried the infection as long as 96 hours, that no trace of typhoid bacilli was found, but we found various other organisms. The bed-

bug smears his culture, because he drags on the ventral surface. The fly lifts himself up and infects at different points, while the cock-roach is decidedly more cleanly than either in inoculating the media. You will find in one of those plates that the fly not only carries the typhoid bacillus on his feet but also on his wings. He had one wing left, and all the time was trying to fly, and along with that he left a culture of typhoid fever bacilli. I brought these plates, not to show that I had found that the fly does carry the typhoid bacillus, but how long they might carry it. This is a very important point in my opinion, and I think one reason why the prevalence of the disease was so great in the army was because there was an abundance of flies about the latrines which were so close that the flies flew from place to place in a very short time, very often falling into milk and water, and lighting on uncooked food and cooked food which was not heated again before being eaten. After the food was eaten the men would naturally be taken with typhoid fever if their power of resistance was not great enough to destroy the organism. The organism there present on the Petri dishes are, of course, various pus organisms, and some of the numerous organisms carried by the fly, and the fly is not the only thing that carries infectious diseases. I do not know that infection of malarial fever by water has ever been demonstrated. It has been positively proven that malaria is carried by the mosquito, and that it is inoculated by his bite, and that it is carried by certain kinds of mosquitoes, at different times in different parts of the country. Every mosquito that bites does not carry malaria. The gray dappled wing mosquito is one of the mosquitoes that carries it. This theory was claimed to be introduced by some Italian observers, but the Philadelphia Medical Journal, March 11th, 1890, gives an account of an American named Crawford advancing this theory in 1807. Dr. A. F. A. King claimed that the negro enjoys a partial immunity on account of the character of his sudoriparous secretions and dark skin, the mosquito not being able to see him quite so well.

In some parts of Europe, which I don't recall at this moment, to prove that malarial fever was carried by mosquitoes, an observer, Dr. Mason, if I remember correctly, took some up into the mountains to a home for the infirm, where some of the inmates had been for a number of years. Malarial fever had never been known there. They took these mosquitoes and put them into a room with three patients and allowed them to stay all night. In something like a week the patients began to feel a little chilly and had a slight rise of temperature, but not a marked chill, and no plasmodia was found in the blood at this experiment. A little later they recovered by doses of quinine. There was only one willing to undergo the experiment again. They got other mosquitoes and placed the patient in the room as before, and all the characteristic symptoms of malaria occurred with the plasmodium in the blood, and fifteen grains of quinine was given daily, hypodermically, which cured him of the characteristic chill, fever and sweat. Up to this time I have been unable to find any data which proves any propagation of malarial fever by water or air, but it will no doubt be attempted in the near future.

In reference to the importance of the manner in which infection is carried by bed-bugs and cock-roaches in the laboratories is that often the excreta from patients are thrown around the room on soiled linen, and if these parasites are there they can carry it into the walls of the room and afterwards bring it back again, after fumigation has been completed. Therefore in such instances disinfecting agents which cannot reach or destroy the carrier and his infection is undesirable and imperfect. I think formaldehyde is the best.

In reference to the propagation of tuberculosis by bed-bugs, I recently noticed a case in the American Microscopical Journal, Oct. 22d, 1894, page 295, which Alleger was quoted by Craig as giving a report by Denevre, in which a case of tuberculosis was acquired in the bed of a brother who had died of tuberculosis. After the brother's death it was noticed that his body was covered by bed-bug bites, and investigation showed the bed-bugs present in large numbers, and 60 per cent. of the bugs possessed the power of infecting guinea pigs, which afterwards died of the disease, although the room was fumigated before the second brother occupied the room, evidently proving that the bugs sought a hiding place during the process of disinfection. A report of the work carried on in the Jefferson Hospital Laboratories by Dr. Rosenberger and myself will appear in the Philadelphia Medical Journal on the 5th of June, in an address read by Prof. W. L. M. Coplin before the Pennsylvania State Medical Society, at Johnstown, May 17th. I wish to thank Dr. Ramsaur for his excellent paper.

Foreign medical men are permitted to practice among people of their own nationality in Italy, but are forbidden, under pain of prosecution and fine, to give first aid to an Italian in a street accident.

The Continued Fevers of North Carolina.‡

By Benj. K. Hays, M. D., of Oxford, N. C.

I have no apology to offer for bringing before you to-day a subject with which you are already familiar, which you have often discussed, and of which no doubt you are growing weary.

The frequency with which the continued fevers of North Carolina recur; the honest doubt that often exists in the mind of the most intelligent clinician as to the nature of the fever with which he has to deal; and the stern fact that the responsibility of solving the problem rests upon the practical country doctor, and not upon some theorist in a far away German laboratory, makes it imperative that this subject should ever be kept fresh in our minds. I have no new theories to advance, but have tabulated answers to fifty circular letters of inquiry in regard to these fevers, sent to representative men in various sections of the State. In addition to the answers sent to me I have drawn from similar reports made in neighboring States, from the latest text books, and from current literature on the subject.

Having made my report I will be followed by gentlemen eminently qualified to discuss this broad subject in its various phases.

1. How do you classify the fevers seen in your practice?

To this question the answers were: Malarial, typhoid and simple continued or ephemeral. Six answers included typho-malarial and of these two indicated that they regarded typho-malaria as a distinct disease.

2. To what extent do they prevail and what is the mortality of each?

Typhoid fever was reported with about equal frequency in the different sections of the State with an almost uniform mortality of 5 per cent. Osler reported a mortality of 8 per cent. in eight hundred cases treated at Johns Hopkins. Malarial is much more frequent than typhoid in the eastern and central portions of the State, rare in the west. The mortality of malarial fever is practically nil with the exceptions of the rare cases of pernicious malarial seen in the extreme east.

Recent investigation has proved that malaria has been diagnosed in this country far more frequently than it exists. More quinine was used in 1880 than in 1890 and far more in 1890 than to-day. It was the custom in former years, and I regret to say still is with some intelligent practitioners, to regard almost all irregular forms of fever as either malarial pure and simple, or in some way influenced by paludism. There is no doubt that tuberculosis, typhoid fever and many forms of auto-infection have been repeatedly diagnosed and treated for malaria. When the fever disappeared with the patient under the influence of quinine it was regarded as a positive proof of the accuracy of the diagnosis, and when the fever continued it was maintained with equal certainty that on a certain class of material favers quinine had no effect.

From 1885 to 1890 inclusive, a larger number of deaths was reported from malarial than from typhoid fever in the cities of New York, Brooklyn and Baltimore.

During the past five years deaths from malaria have been very infrequent in these cities, while the mortality from typhoid fever has increased. We would like to believe that this reduction in the mortality of malaria has been due to improvement in treatment or sanitation. Unfortunately it can be accounted for on no other hypothesis than that of an error in diagnosis in the earlier reports.

3. State frequency and character of eruption?

To this question only one observer answered "eruption in every case of typhoid." Three or four reported eruption in 50 per cent. of cases, quite a number answered 20 to 25 per cent. and others "seldom seen," "rare and indistinct," "very infrequent." There is no doubt that the characteristic rose colored eruption noted by Northern writers is frequently absent in otherwise typical cases of typhoid fever seen in North Carolina, and that in this regard at least our fevers differ from those seen in the Northern States.

Loomis doubted if the rose spots were ever absent. Osler and Pepper agree that they are not always present, that they are more frequently absent in children, and that in some cases they are found on other parts of the body when absent from the chest and abdomen. When present they are regarded as pathognomonic.

4. Do you see typhoid and malaria in the same patient? If so state whether you regard this as a mere coincidence or do you believe the two to be combined in one disease—typho-malaria?

To this question Dr. Osler replied "There may be combined infection—we have had one case only. This we regard as a coincidence, and so far as our experience goes the malaria does not influence the enteric fever in any special way. A large number

‡Read before the North Carolina Medical Society at Asheville, N. C.

of our typhoid cases come from very malarious districts."

Dr. R. L. Payne, of Norfolk, wrote: "Both poisons may exist in the same patient, modifying the usual symptoms though usually the malarial element is eliminated early by the use of quinine."

A reporter of recognized ability who has devoted a great deal of study to this subject, confirming his diagnosis by microscopic examination, writing from a section in which both forms of fever prevail says: "Never, I believe the typhoid germs are killed by toxins from the malarial germs, hence the two cannot exist in same patient at the same time."

A number of reporters, men of experience and recognized ability, notable among whom was the Nestor of our society, stated that they had not seen the two forms of fever in same patient. The majority of reporters however recognized the mixed infection as a rare coincidence. Two reported typho-malaria as a separate disease and four others were in doubt. A number of reporters objected to the term typho-malaria. It was clearly shown that the term did not convey a definite idea, since one class of observers used it to indicate one condition, while others used it with an entirely different meaning. Thus, the term is employed to indicate the presence of malaria and the specific poison of typhoid fever; by others, malaria of a severe type in which the patient sinks into a typhoid state; while a third class of observers use the term to designate a separate and distinct disease. I have not been able to find it so used however by any standard authority, even among the older writers. The term was introduced by J. J. Woodward, of U. S. A., who wrote as follows: "Typho-malarial fever is not a specific or distinct type of disease, but the term may be conveniently applied to the compound forms of fever which result from the combined influence of the causes of the malarious fevers and of typhoid fever." The results of Woodward's investigations are too well known to be dwelt upon. Among the cases diagnosed by him typho-malaria there was a mortality of 8 per cent. Those diagnosed typhoid fever had a mortality of 35 per cent.

In our recent war with Spain large numbers of camp fevers received careful clinical study, aided by exact laboratory investigations, carried on both in the camps, and in Northern hospitals where many of them were taken for treatment.

Dr. Charles E. Nammack, writing of the camp fevers that he had seen in Bellevue Hospital said: "We found no reason to recognize a distinct type of continued fever which is neither malaria nor typhoid, or one which is a compound of both—the so-called typho-malarial fever."

Dr. Meyer stated that in thirty or forty soldiers treated at Mt. Sinai Hospital there was only one case in which there was any approach to a double infection.

One writer said that he had made inquiries at the various hospitals of New York City concerniug the double infection and learned that in all but one hospital the malarial organisms had been found in the blood of from one to five per cent. of the typhoid fever cases.

Dr. James Ewing has made the following valuable report, based upon the study of 800 cases of fever at Camp Wykoff. He said: "A great many cases which were indistinguishable from typhoid fever without the most careful examination proved to be clear cases of infection with the æstivo-autumnal organism of malaria. Over two hundred cases of typhoid fever were studied and in nearly all of these there was also malarial infection. In spite of these favorable conditions for mixed infections in no undoubted fatal case of typhoid fever (in which the diagnosis was confirmed by autopsy) was the malarial organism found. In five cases of typhoid fever the plasmodium of malaria was found in the blood during the acute exacerbations occurring during convalescence from the typhoid fever. From these observations the following conclusions were drawn: (1) Mixed infection of typhoid fever and malaria undoubtedly exist. (2) When typhoid develops in a case of active malaria the element nearly always becomes quiescent, and has little or no effect on the course of the typhoid fever. (3) Malarial infection frequently outlasts the typhoid infection and make itself manifest during convalescence. 5. Do you see continued fever which is neither typhoid nor malarial? If so give clinical history of such a case?

To this question the majority of the answers were, "No." By others a mild form of fever was described lasting in some instances only a few days, in others three or four weeks and attended by headache and foul tongue, but no epistaxis, diarrhœa, tympany or rose colored spots. Those who had made miscrocopical examinations of the blood reported the malarial organisms absent, while nearly all agreed that this fever was uninfluenced in its course by quinine. It is evident that the fever here described as a third form of continued fever by a limited number of reporters is regarded by others as a mild form of typhoid.

Dr. James, in the Loomis-Thompson System of Practical Medicine the most recent authority that I have been able to consult, says of these fevers described as simple continued, ephemeral, catarrahal and febricula that they—Are far from uniform in their manifestations; comprise irregular cases of many different maladies; many are typhoid fever; some are due to unnoticed leisions of throat; many are due to fatigue or exposure especially to heat.

6. To what extent and with what result do you use quinine in such fevers?

Upon the mild form of fevers just described it was generally conceded that quinine had no effect. Dr. Robertson, of Danville, who likes the name typho-malarial and whose opinions are certainly worthy of most serious consideration writes, "If malarial I give commandery doses of quinine, and when the malarial element predominates I obtain an abatement of temperature and all symptoms. I do do not use it in typhoid fever but often when not tolerated in first two weeks of typho-malaria it does good service when the fever remits.

Over the names of three men of recognized ability from an eastern town was the following: "In this section we always use quinine in all fevers at first and successfully in a large majority of cases. Cases not yielding to quinine in three or four days generally prove to be continued malarial, typho-malarial or tyyhoid in order mentioned."

A large number of reporters stated that they had used quinine for the first three or four days for diagnostic purposes. If the fever was malarial in origin it yielded promptly, otherwise it generally proved to be typhoid, in which case quinine was worse than useless.

In a private letter Dr. Osler stated that, "Only a careful blood examination enables us to differentiate cases of the astivo-autumnal malarial from typhoid fever," but in their published writings both Osler and Thayer positively affirm that any form of malarial fever known in this country will yield to quinine in three or four days.

In a paper read before this Society two years ago on this subject Dr. E. C. Register maintained that quinine was a positive and speedy cure for malaria, and quoted numerous leading authorities to that effect. His position was undisputed by those who discussed the paper at that time and since then has been confirmed by every observer who has based his diagnosis upon a microscopical examination.

The majority of doctors in North Carolina use quinine in the first few days of fever to aid in determining the diagnosis. This has been my own practice, but recent investigation has convinced me that it is wrong. Take three cases of fever which present when first seen, the same clinical picture. One is typhoid, one malarial and one due to gastric irritation. We give quinine in all three. Upon the typhoid patient its effect is to increase nervousness, produce nausea and perhaps hemorrhage and death. The patient suffering from gastric fever is certainly made worse by the quinine and only the malarial patient cured by it. Since it has become possible to diagnose malaria with certainty by the microscope, a method both safe and simple, I maintain that it is wrong to hazard the use of quinine.

Conclusion.—From this symposium no definite conclusions can be drawn since the opinions expressed have been so varied. My own conclusions in regard to the present status of the continued fevers in North Carolina is as follows:

I. Mixed infection does exist, but is extremely rare.

II. The term typho-malaria is indefinite, misleading and should be abolished.

III. Malarial fever is diagnosed more frequently than it exists.

IV. Malaria invariably yields to quinine therefore there should be no continued malaria fever.

V. Typhoid is the only form of continued fever seen in North Carolina.

VI. Tuberculosis, la grippe, septic intoxication, septic infection (especially in child bed) thermal, and other forms of fever are often mistaken for either typhoid or malaria.

DISCUSSION.

Dr. Reagan.—I consider the paper a very valuable one, but my opinion is there is a difference in typhoid fever in this mountain country and typhoid fever in a different section. Dr. Miller, professor of the practice of medicine in one of the colleges of Atlanta, and myself had a conversation upon this point some years ago. Dr. Miller frequently visited the mountains in this and other sections in the summer time and saw many fever cases and he agreed with me that there is a difference in the typhoid fever of the mountains and the typhoid fever where malaria exists. Here we have no malaria. There is a large section of the country through here where it is unknown, and I suppose always will be unless it is brought here, but there are cases of malaria which we have to contend with, where persons have the malaria in the system and come here for treatment, and in cases of that kind the typhoid fever here

is very much like the typhoid fever of other sections. I am a Tarheel, not by birth or education, but by adoption. I have been here fifty years, and I suppose that would entitle me to be called a Tarheel or North Carolinian. When I came to this country I had a great deal of malaria in my system. It was thought by physicians that I could live but a short time, but I have lived, while those physicians have all gone before me. I think there ought to be a distinction made between the mountain typhoid fever and the typhoid fever of malarial sections.

Dr. Royster.—At Dr. Hays' request I have made up my mind to make a few remarks on this subject. I have already on occasions before this read two papers on this subject before the Society. In the first one of those I took the ground that there was no other continued fever in North Carolina except typhoid and malaria. In the second I pointed out by some practical work on the subject the proofs that I had brought to bear. I am still of the same mind and want to reiterate the statements I made in both of those papers, though I have recently done very little work in that direction, having been busy with other matters. I have not prepared anything for this discussion, and therefore must go over the ground that I have before done. In my former papers, as I said, I took the ground first that there was no third continued fever in North Carolina. I think the burden of proof rests upon some one who believes that there is, to prove it. In sections where we have malaria we also have typhoid. Dr. Reagan says there is no malaria in Asheville or the western part of the State. I do not know that any series of blood examinations has been carried out in sufficient numbers in fever cases to absolutely prove that question. I do not think I am prepared to believe that. I do not know anything about the so-called mountain fever, or why it should differ from typhoid fever in other localities. Second, I believe that quinine is a specific for malaria. I think sometimes that it is administered in a faulty manner, and I believe, as Dr. Hays expressed in his paper, the opinion of Dr. Osler that the æstivo-autumal type yields reluctantly to quinine. This is a smaller organism than the other two varieties, lives almost solely in the corpuscles, is much harder for the quinine to affect, and possibly more insidious in its onset and development. I have seen cases of that kind which yielded gradually to quinine, but very surely. Sometimes the fever would last ten days, would begin with a chill and temperature of 103, and fall half or one degree every day until it came to normal. I do not believe in the term "typo-malarial fever," and I concur in Dr. Hays' opinion that it should be abolished. There is no doubt that the two diseases may co-exist. I suppose I have examined the blood of about 150 patients with fever, and I have seen what I regard as two cases of mixed infection. It is my rule in every case of fever to examine the blood as soon as possible. If I find the plasmodium on the first examination I give quinine. If I do not I examine again the next day. This question of administering antipyretics even quinine, just because the patient has fever, is pernicious. It is not the fever, as we understand, that is producing harm. That is only a surface symptom. My opinion is that to give quinine indiscriminately does harm. It clouds the diagnosis, as much as the continual use of morphine in appendicitis. I have not had experience with the co-existence of the two diseases to see which untimately predominates, or to make any report as to the relation of the one toward the other. In running over these points hurriedly I may have omitted some thing, but my opinion remains the same as expressed two years ago although, as I say, I have made but little investigation lately. I must make the assertion again that the burden of proof rests upon somebody to study and name the third form of fever.

Dr. Booth.—The most excellent paper just read is very instructive. There are a few things in it in which I disagree with my friend Dr. Hays. One point that he makes, however, might be misleading, and at the same time he does not mean to mislead- He means exactly what he says. That is, that the term typo-malarial fever is misleading. That is a fact, yet there is a typo-malarial fever in North Carolina. It is not like the mixture which exists between the horse and the donkey—we do not get a mule, but we have the two diseases in the same patient at the same time. We have a case of fever here. The fever is low in the morning and high in the afternoon. You give him a dose of quinine and the fever becomes more regular and becomes a case of typhoid fever. You go ahead and treat your case of typhoid fever, and in the convalescent stage you have a regular case of intermittent fever. There are gentlemen here who say there is no form of continued fever in North Carolina except typhoid fever. Now when I commenced practicing 32 years ago there was an epidemic of typhoid fever in the section in which I commenced. We had the swelled abdomen, and tympanitis, a havy coated brown or thick red tongue, delirium, with the patient

sick from six to eight weeks. We knew nothing about antiseptics, yet we gave turpentine, and it certainly did the patient good. I suppose it was its antiseptic properties. We had diarrhœa, some times almost impossible to control. We gavé opium and nitrate of silver. We calked the bowels if we could, and we usually saved the patient if we did not have perforation. As a rule the patient got well. In the last 10 or 15 years we have in our section a continued fever. I do not know what it is. None of them die, so we cannot have any post mortem. We have very little tympanitis. They get well in two or three weeks. Quinine does not diminish the fever. I don't know what it is. A good many doctors call it typhoid fever. It is not a febrile fever. It is too long for that. It is not like the fevers we were acquainted with a good many years ago. As I said, quinine does it no good. I believe that quinine does typhoid fever harm. But in this fever, if you take care of your patient and give him antiseptics, even turpentine and calomel, he always gets well, and they do not only get well under my treatment, but under everybody else's treatment. Those are the remarks I wish to make for the sake of the older men. The young doctor at the present time has a great advatage over the doctor when I was a young doctor. They teach them more, and they are much better prepared to doctor folks than we were then. They have the microscope. I never but once have seen the malarial germ on plasmodium. I looked in another man's microcope. I have a microscope, but I am not a microscopist. But for the older members of the profession I make these remarks in regard to typhoid fever. I think the older men will bear me out as regards the typhoid fever of the past and the so-called typhoid fever of the present.

Dr. O'Hagan.—Is there such a thing as typho-malaria? The discussion has wandered off into several side issues. I agree, though, with most of the gentlemen who have spoken that there is no such thing as typho-malaria in this State, but I believe our fever is due to a mixed infection. Time and time again I have seen what we call typhoid fever change into the regular intermittent fever treated by quinine. I have seen again in the convalescent stage malarial fever express itself in the usual way. Like Dr. Booth, I am an old doctor. I have gone through all manner of experience in fevers. The old typhoid fever with the classic symptoms has disappeared of late years. It is not in any manner so pernicious as it was, and I do not know but that the mortality then was due to overdrugging. There is one debt that we owe today to the homeopathists—they have taught us how to accomplish much more with much less physic. Much harm has been done with physic, and more especially in the treatment of typhoid fever. I remember one case where the patient in 30 days took 90 grains of quinine daily and still survived. I will not go into the treatment of these fevers. You are all as familiar with them as I am. I will wind up by thanking Dr. Hays for the admirable paper he has read and the pains he has taken and the valuable information he has given.

Dr. J. H. Williams.—There is one point brought out of which I wish to make special note, and that is in reference to the so-called hybrid fevers—fevers of short duration. They are not fevers that depend upon any disturbance of the prima via that we know of, they are not malarial. We simply call them typhoid. They are not accompanied by the symptoms that accompany our well marked cases. I have observed typhoid fever in its home, Philadelphia, and you all know what typhoid fever is there. I have had an opportunity to observe it here in this mountain section of the country. We have here a fever symptom of short duration, about three weeks, that has been called by a great many catarrhal fever and gastric fever. A great many names have been given to it, but in almost every instance, and especially of late years, we find that these cases are reported as malaria. They had this form of fever, but what is it? Under the microscope it is shown to be typhoid. It is modified by the environment of the patient. It is modified by the newer methods of treatment, local application of water and all the methods by which we today control hyper-pyrexia. We do not give quinine, because we have no malaria here, except in people who come up here with their blood full of it. I believe there will come a time when typhoid fever as typhoid fever will almost disappear from the eastern part of our country, because that is where the germ best flourishes, and in such quantities that it is bringing about a personal immunity which by heredity will gradually eradicate the disease in its well marked form.

Dr. Hays.—Permit me to say in conclusion, that I have far more respect for the clinical experience of these gentlemen who have spent years in the sick room than I have for any theories, and if my paper has done nothing else than bring out this discussion, I think I can congratulate myself upon having read it. In reply to Dr. Reagan—I agree with him. There is a differ-

ence in degree in the fevers we see in the eastern and western parts of the State. I believe they are both typhoid fever. So far as my limited investigations carry me, I believe that the literature of these western fevers is an unwritten book, and I therefore wrote to Dr. J. Howell Way, of Waynesville, for a paper on these fevers, which he is to read, and I am sure he will tell us definitely what they are, as he told me he had collected data on several hundred cases he had treated during the last 15 or 20 years. In reply to Dr. Booth, he says he likes the term typho-malarial fever. I agree with him that we might use it if it conveyed a definite meaning. There is no objectson to it if it conveyed a definite idea, but the term is misleading, therefore let us eliminate an equivocal tarm and use one in its place which is degnite. Dr. Booth is still in doubt as to whether these mild continued fevers are typhoid or not. We all have known of cases in which a crowd will go on a picnic, or drink milk from a dairy, or do something in which the infection is known to be from a single cause. A large nnmber of cases will occur—say 24 cases of fever. Six of then die from typical typhoid fever, six have a severe form, six have a mild form, six just feel badly, possibly have a headache and diarrhœa. Are we to believe that this one cause of infection gave four different forms of fever, or is it not more probable that the whole 24 had the same form but owing to the difference in the resisting power and the differnce in the amount of poison taken, the fever had a different effect. Dr. T. L. Booth was with me in an epidemic of fevers of this kind, in which I saw over 100 cases. He did not what they were. Some half dozen of these were typical cases of typhoid fever. The rest were these mild continued fevers. I see no reason on earth for giving a different diagnosis for the two.

Meningitis.‡

By Jno. E. S. Davidson, M.D., Lowesville, N.C.

The most interesting and most important disease in early life is that which is now designated meningitis. The mortuary statistics that I have gathered up show that it is the cause of death in from one in twenty-five to one in fifty of the entire number of deaths in childhood, in different years the proportion varying some. Such a disease as this should attract the attention of all physicians most earnestly.

‡Read before the North Carolina Medical Society, Asheville, N. C.

Cerebral meningitis may affect the *dura mater* or *pia mater*. In the first case it is pachy-meningitis, and the second lepto-meningitis. It may be *acute* or *chronic*. Pachy-meningitis is rare in early life, except from traumatism or as a lesion in some specific disease, such as syphilis, therefore I will only mention it.

Lepto-meningitis, on the contrary, is very frequent in childhood. As to its pathology there are two general forms—tubercular and non-tubercular. The former usually affecting the base and the latter the convexities of the brain.

It is not the purpose of this paper to discuss cerebro-spinal meningitis or fever as its cause is a microbe, and it should be associated with other diseases of the infectious class. I will discuss only the non-tubercular forms of cerebral meningitis. This is sometimes called purulent meningitis, but this designation is not proper, for some cases have no pus, and on the other hand we sometimes meet with purulent exudation in the tubercular form.

The term meningitis as used in this paper then will refer to the non-tubercular form of lepto-meningitis. Meningitis in its acute form is a disease which may attack robust as well as debilitated children. It may occur at any age, but is rare in the first year of life, and most common in the middle period of childhood.

Meningitis is generally secondary. Some rare cases have been reported where the disease was apparently primary. I myself have never seen a case of non-tubercular meningitis which was undoubtedly idiopathic; at any rate the great majority of cases are secondary. In my experience I have found meningitis most frequently of traumatic origin, or arising from some disease in the ear by the inflammation extending through the petro-squamosal suture to the cerebral meninges. You will find a small number of cases of meningitis caused from the specific microbe of such diseases as scarlet fever, measles, erysipelas, pneumonia, rheumatism, syphilis, chicken pox. The morbid anatomy differs considerably in different cases.

The inflammation in a case of acute meningitis is apt to extend downwards and to involve the *pia mater* of the cord. In mild forms there is an abundant production of cells resembling the cells which coat the surface of the membranes and fibres which make up the *pia mater*. The cell growth is general, involving the *pia mater* over most of the brain surface. The inflammation is one which does not result in the production of pus, or serum, or fibrin, but of new connective tissue cells. This form of

meningitis has been called acute cellular meningitis, it is of right frequent occurrence. It has the ordinary clinical symptoms of acute meningitis.

Another form of acute meningitis has been termed by some pathologist the exudative, because it is characterized by an accumulation of serum, fibrin, and pus, chiefly in the meshes of the *pia mater* and along the walls of the blood vessels. The absolute quantity of the exudation varies greatly. In some cases death may be caused with so slight a formation of the exudate that only by the use of the microscope can the pus cells and fibrin be detected; on the other hand the exudation may accumulate to such a great amount as to flatten the convolutions of the brain. You will generally find the exudative form of meningitis following ear diseases, the portion of meninges nearest the ear, therefore, being effected most, the inflammation sometimes also leading to abscess. If the meningitis is caused from exposure to the sun's rays, the inflammation is at the summit of the brain. The extent of the inflammation varies greatly in different cases, and the results in some cases is strong adhesions between the *dura mater* and the *pia mater*.

Without describing symptoms and treatment in general, I will mention three cases that came under my care.

The first case that I will report is a little boy, four years old, who fell and struck the back of his head. He did not complain of much pain for two days, when in the evening I was sent for and on my arrival found his face flushed and vomiting a great deal, and was restless and constipated. On the next day the symptoms increased in severity. The pupils were equal and re-acted very well to light. He was very restless, but showed no evidence of pain. Eyes fixed. Feet and hands cold. About the third week he began to improve and continued to do so.

Treatment was simply to keep him very quiet in a dark room. His diet was carefully regulated. Calomel given in ten gr. doses until bowels moved. Six grains of bromide of potash and chloral was given several times a day. The iodide of potash was given three times a day.

Recovery took place in about two months. My diagnosis was traumatic non-tubercular meningitis.

Case 2d.—The next case that I report is one of meningitis, in a child twelve years old. He was healthy at birth, and remained so, and never had any disease except measles. I was called to see him January 30th, and diagnosed it meningitis,

This attack, in all probability, was produced by a fall he had at school four days before, in which he struck the front of his head over left eye. Later, on the day of the fall, he began to complain of pains in his head and to vomit. He was very fretful, with heavily coated tongue, and lay in bed protecting his eyes from the light. Pupil of left eye was dilated and would not contract to light; afterwards, both become dilated. The bowels were constipated and he did not care for food. Temperature 105 deg. the 5th and 6th day after the fall, pulse 85. Temperature came down shortly to about 100 deg., and remained about that for four weeks. He seemed to remain about the same, except he was loosing in weight. About the fourth week he became delirious. The delirium was sometimes active, and then it would disappear and he would recognize his parents. He was very cross in the intervals of the deliriums, and would roll his head from side to side. He never had convulsions, but later on had paralysis of both upper and lower extremities.

Treatment was to keep him perfectly quiet and the room dark to protect his eyes. He was given the bromide of potash and chloral to quiet him. Calomel and the iodide of potash was also used. He died about the end of the fifth week.

Case 3d.—The next case that I will report is a little girl, three years old, whose parents had always been healthy, and the patient's health in the past had been good. She was in the habit of spending a great deal of her time in the hot sunshine. The first symptoms noticed were that she was fretful without any apparent cause, and complained of pain about the summit of the head. Later on temperature rose and vomiting came on. About the third week pupils became dilated and raged. She got very restless and dreaded the least noise or light. Bowels constipated. Tongue furred and heavily coated.

Treatment.—Gave calomel in 1-10 grain doses to move the bowels. Used rubber coil to lower temperature. Bromides and chloral given several times a day.

About the sixth week she commenced to improve, and about the third month was apparently over the attack.

My diagnosis was non-tubercular meningitis, caused from exposure to the sun's rays.

Aconite Poisoning--The Diagnosis and Treatment, with Report of a Case.*

By E. A. Moye, M. D., Greenville, N. C.

Poisoning by aconite is of such rare oc-

*Read before the North Carolina Medical Society, Asheville, N. C.

currence that I hope the following case which came under my care will prove interesting to this Society. In reporting the case I shall not review the literature on the subject or give the symptoms enumerated in the various text-books of therapeutics, but I shall call attention to two symptoms that I have not found reported, which in my case were very important.

The history of the case is as follows:

W. A. B., white, male, age 22, weight 124 pounds. About 6 o'clock in the afternoon he visited a drug store and asked the clerk to give him a dose of "sun cholera cure" to relieve a pain in his stomach. The dose was not measured accurately, but he tells me that it was a teaspoonful or more. Immediately after swallowing the dose his lips, tongue and throat began to tingle, and he remarked to the clerk that it did not taste like the medicine he had been taking. He went from the drug store to supper, but could not eat on account of a feeling of uneasiness. Soon the muscles of his back and calf of his legs felt as if pins were sticking in them, and this soon extended over the whole body. He went back to the drug store and told the druggist that he had taken the wrong medicine, and if something was not done for him it would kill him. Both the druggist and his clerk, who had prepared the medicine for him, insisted that he had taken the medicine called for and his symptoms were due to the morphine contained in the sun cholera cure. He was so much alarmed, however, that I was called to see him.

I found him very much excited, walking the floor and declaring he was going to die. He could not stand without support and could not walk without assistance. His face was pale and drawn, eyes sunken, pulse fairly good, full and regular. At the time I could get absolutely no history. The clerk insisted that he had taken sun cholera cure and brought me the bottle to examine. I suspected aconite poisoning from the burning and tingling of the mucous membranes with which the drug had come in contact. As my office was but a short distance away I had the patient carried there and at once emptied his stomach by means of the stomach pump and washed it out thoroughly with hot water. Before doing this, however, I had the patient placed on a couch with the feet elevated. Immediately after his stomach was emptied the condition of the patient became much more serious. His pulse was imperceptible at the wrist, and the action of his heart was very weak. He now complained of severe pain in the cardiac region; said he felt as if his heart was in a vise. The numbness had extended over the whole body. Consciousness was not lost.

The treatment was that laid down in all text-books. Nitroglycerine, strychnine and tincture digitalis were administered subcutaneously. Counter irritation was applied over the heart. The patient was kept in absolute rest, with head lowered. The arms, hands, legs and feet were rubbed vigorously. In two hours I considered the patient out of danger, but remained with him several hours and gave hypodermic of morphine to produce sleep. The following morning he felt very much better, but was still weak, and his feet and legs were painful. The soreness of his feet and legs I attribute to the force used by my zealous but untrained assistants. He was able to resume his duties as a clerk in two days, and since that time has felt no bad effects from his dangerous experience.

The tingling and burning of the mucous membranes with which it comes in contact, are very important diagnostic symptoms of poisoning by aconite, and it was upon these that I based my diagnosis. The diagnosis was verified the following day when I visited the drug store and found that the bottle containing tincture of aconite was similar to the bottle containing sun cholera cure and just below it.

The failure of the heart following the emptying of the stomach was something I was not prepared for and very alarming. I do not find this symptom enumerated among the symptoms of aconite poisoning. The cardiac pain was very severe and gave the patient more anxiety than any of the other symptoms. This pain was relieved by the use of stimulants and counter irritation over the heart, and was in my opinion due to the depressing action of the drug on the heart. muscle.

Progress in Serum Theraphy‡

By Chas. S. Mangum, A. B., M. D., Prof. of Physiology and Materia Medica University of North Carolina.

Since bacteriology became a science the most earnest efforts have been put forth by eminent medical men to isolate for every infectious disease some specific microorganism, thus leading to a clearer understanding of many phenomena and a more rational treatment in numerous cases. To what extent these efforts have succeeded is abundantly shown by the marvelous growth and development of this comparatively recent science. Year by year new and im-

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portant discoveries augment the invaluable fund of knowledge which has already been added to the literature of medicine, until we have now reached a point where it is fair to concede that the present generation will probably see every dreaded infectious disease accurately classified according to the micro-organism to which it owes its fatality. Parallel with this search for specific eteological factors there has been inaugurated during recent years in the physiological laboratories most comprehensive researches into the vast new field of therapeutics opened by the better knowledge of the diversified activities and characteristics of bacteria. With the knowledge of toxins and toxalbumens came first the supposition and later the proof of the presence of the so-called anti-toxins, powerful immunizing principles, of unknown chemical composition, but undoubtedly possessing the power either to destroy the micro-organisms themselves or neutralize and render harmless the toxins elaborated by them. The profession is more or less familiar with the surprisingly successful results obtained by serum therapy, which though still in its infancy, has already been conceded to be one of the greatest therapeutic discoveries of the century, giving promise of new life to thousands. Launched from tho laboratories in the early eighties, it at first met with most discouraging results, and for years was under a cloud of disapproval, and this cloud has not yet been wholly removed. But its advocates persevered and iu 1894 with the introduction of Behring's anti-diptheritic serum it began a career which has lifted it steadily into favor, until now the beneficent nature of the treatment has been established, at least in part, beyond all doubt or question.

It is readily apparent to one watching the progress of the year in the treatment of diseased conditions, that the profession, whether consciously or unconsciously, is basing its principle hope of material advancement in therapeutics upon the experiments now being made with different anti-toxic serums. So great is the interest aroused in these new remedies that a report of progress in therapeutics and materia medica practically resolves itself into a report of new serums of real or imaginary worth. It is evident that the tendency of the present time is to depreciate to a great extent those remedial measures by means of which we have been wont heretofore to strengthen and aid the natural functions, and hunt for a curative and immunizing serum for every poison that threatens the life of man. As is always the case with new theories, the claims of serum therapy will doubtless be pushed by enthusiasts to an almost ridiculous extreme; Then the pendulum will swing back and anti-toxins will take their place among other remedies upon our lists according to their proved efficiency. At this time the data are still too incomplete for one to guage the future scope of this new method of treating infectious diseases, but encouraging progress has been made and for so short a time the results have been little short of marvelous. Whether serum therapy will broaden out and develop as rapidly as did the science with which it is so closely allied, or whether it will prove to be in a large measure a popular fad and of only a sadly limited sphere of usefulness the near future will disclose, but the present gives promise of a future which will practically revolutionize our methods of treating all those diseases whose symptoms are due to the presence in the body of poisons of bacterilogical origin.

To quote an eminent authority: "Serum therapy has merely entered the first stage of its development, and already the results are of much value. The mortality of diptheria has been reduced from 40 to 8 per cent; the mortality of hydrophobia has shrunk at least from 16 to 1 per cent; the prognosis of tetanus has been deprived of much of its gloomy forebodings; the cure of pneumonia, of tubercle, of erysipelas, and of septicæmia, is seemingly on the eve of being realized; a complete demonstration has been obtained of the power of antivenins to prevent the toxic and lethal effects of venoms; and the experimental data are surely being accumulated with a view to the discovery of anti-toxic serums for the cure of yellow fever, the bubonic plague, Asiatic cholera, typhoid fever, cerebro-spinal meningitis, and even of leprosy and syphilis. The anti-toxic treatment of diptheria has made the most pronounced progress towards permanent establishment, being now almost universally accepted by the medical world. The experience of the past year has served to place this treatment in a position practically unassailable. The literature on this subject has grown to be almost voluminous, and statistics without end have been brought forward, showing such an enormous decrease in the rate of mortality under the new treatment, that by many it would be considered a crime for any intelligent physician to refuse to employ this means of succor when it is so readily within his reach. Having accepted this serum as a remedial measure it is now the aim of the profession to improve it and obviate any of the disadvantages which may attend its

use. The resulting joint pains and swellings and the cutaneous eruptions have been shown to be due to the use of an heterogeneous serum and not to the anti-toxin as at first supposed. It is proposed to avoid these unpleasant effects by the use of highly concentrated serums, where the number of anti-toxic units to each cubic centimeter of serium is very large, causing the volume of serum necessary to a dose to be small; and by thoroughly filtering this serum through an extremly fine filter, thus getting rid of all extraneous substances. It has been clearly demonstrated that the most useful sphere of diptheria antitoxin is to be found in the realm of preventive medicine, as a prophylactic and immunizing agent. In close communities, as asylums, hospitals, schools, etc., where the gravest danger is to be feared in the development of secondary cases, the results have been most satisfactory, the disease, in many instances reported, having been effectually stamped out before it could gain a foothold. This in itself may be considered a great triumph. To obtain the best results from this serum as a curative measure it must be administered early in the course of the disease, before the ravages of the poison have become too great; the initial dose must be large, in some cases even amounting to as much as 3500 or 4000 units; the dose to children should be relatively much greater than that administered to adults, because the most virulent cases occur among children; and finally none of the usual precautionary measures should be neglected as aids to the treatment, simply on the ground that a specific should be expected to accomplish all things. The opportunities for testing the value of tetanus antitoxin have been far less numerous than in the case of diptheria, because of the rare occurrence of this disease. The statistics are as yet wholly inadequate and insufficient in total number, and do not admit of a positive and definite report, though the mortality of tetanus has undoubtedly been reduced to a marked degree since the introduction of the antitoxic treatment. The effects of the serum are immediate in those cases where it is employed early, an amelioration of all the symptoms being at once apparent. It is claimed that when injected subcutaneously it only acts on the bacilli and toxins actually present in the blood, and does not readily come in contact with the toxins in the nervous system. Hence the necessity for a larger dose than that now given, and an earlier administration of it, so that the poison may be met in the blood current and conquered before it eludes the pursuing antitoxin.

As the lethal effects of this bacillus are chiefly exerted upon the nerve elements, some of the most enthusiastic advocates of the treatment have scorned all obstacles and injected the antitoxin directly into the brain substance itself. They report most beneficient results, but to the general practitioner the intra-cerebral injection of any serum, however potent, still savors highly of fanaticism, and the statistics must necessarily be both more numerous and convincing than they now are, ere he may be expected to accept this procedure as altogether the proper thing to do.

To a much less degree then the two preceeding, though steadily, Marmorek's antistreptococcus serum has gained favor during the past twelve months. As a remedy against erysipelas and septicæmia it has without question done much good, and has yielded most favorable results in many cases, though its action seems to be most unfortunately limited to strictly pure streptococcus infections; and since we do not possess the privilege of selecting the exact infection we would prefer in any given case, but must accept mixed infections when they come, why, this limited action becomes a very serious stumbling block to the successful advancement of this new remedy. The serum is still unstable and unreliable, as well as often impure. Hence it must be handled with care, else it might prove a two-edged weapon and cause a double infection where immunity was sought. It is still too soon to pronounce authoritatively upon the value of streptococcus serums, but their use has been so productive of successively better results that it is well to maintain an opimistic view, until experiments have brought out more satisfactorily the details as to methods of preparation, preservation and application. In December the American Gynecological Society appointed a committee to investigate anti-streptococcus serums and report in May. The publishing of this report is now awaited with much interest.

Other antitoxins for the cure of pneumonia, cholera, the bubonic plague, typhoid fever, yellow fever, tuberculosis and snake venom, are passing through the experimental stage with varying degrees of success. But their place is still in the laboratory and in the hands of the most careful observers, nor should they be historically thrust upon the general profession until the proof of their potency and value as therapeutic agents has been established beyond all reasonable doubt. They represent however the first steps taken in a field of almost boundless extent, which holds truths that medical science will yet convert into bles-

sings of priceless value to mankind. A brief summation of the present position of serum therapy may be made as follows:

In diphtheria alone has it proved a complete success, though it has been very efficient in both rabes and tetanus, and to a lesser degree in erysipelas and septicæmia. The evidence is strongly in favor of an early demonstration of the power of antitoxins to protect against cholera and the plague, and probably also against snake venom. Work with all other serums is yet purely in an experimental stage, and nothing definite or satisfactory has so far been accomplished.

There are two great obstacles to the general introduction and use of antitoxic serums. One is the large bulk which it is necessary to inject in order to obtain a sufficient number of antitoxic units; the other is the enormous expense of preparation. The first is being rapidly removed by the preparation of highly concentrated serums by inocculation with the most virulent cultures, the ideal aimed at being of course the isolation and complete separation of the antitoxic principle from the serum, and its subsequent injection in a sterilized solution. The expense of preparation is still a most serious problem and will be likely to place this means of preserving life entirely out of the reach of many classes of patients for years to come. A case is reported in which over one hundred dollars' worth of tetanus antitoxin was used within a fortnight. The treatment was a success, the man recovered and was no doubt considered a more valuable citizen after the experience than before.

In "Science" of March 10th, 1899, may be found a report of experiments now being carried out in Munich in connection with enzymes as remedies in infectious diseases. It is well known fact that the "bacillus pyocyaneus" when injected has the power to counteract the effects of the bacillus of anthrax. It has been demonstrated, as this report goes on to show, that certain kinds of bacteria (bacillus pyocyaneus) produce enzymes which not only dissolve these bacteria themselves, but other microbes as well, the claim is now made that the substances which we have termed antitoxins, and which lead to recovery from infectious diseases, and produce immunity from them, belong to the enzymes. The authors of these experiments claim to have succeeded in obtaining enzymes which, combined with an animal protein, may be transformed into an immunizing substance, which will be both durable and thoroughly satisfactory. As yet the experiments are incomplete, and the results have not been published in full, but the "time seems near at hand when the the treatment with serum will be replaced by a cheaper and simpler method."

DISCUSSION.

Dr. Levy.—The subject is one of very great interest to me. It is not in the line of tuberculosis, however, that I wish to speak, but rather of diphtheria, because it is in that I have had some little experience. The improvements which Dr. Mangum referred to on yesterday have really not been much in dephtheria toxine. In regard to the use of serum in diphtheria, there is one very common error I have seen in the profession, namely, the comparative doses to be used in children and in adults. He said that the dose should be relatively larger in children than in adults. I, myself, hold that it should not only be relatively larger, but should be actually, certainly as great, and possibly absolutely larger. We see that demonstrated perfectly in the laboratory. Here we have two guinea pigs, one say of 250 gramms and the other of 500 gramms. Toxine in these cases is given to the pigs in ten times the minimum fatal dose, so that the 500 gramm pig will receive twice as much as the other. On the other hand, we find that the same dose of antitoxine will produce the same result in both pigs.

Now if we have two patients, one a child and the other an adult, each one with the same infection and the same germ as the cause, the natural consequence is in the organism in each instance we have an equivalent amount of toxin in the circulation. In the child's system, the organism being smaller, we have for a given quantity of blood a much greater amount of toxine in the circulation. I maintain that the child should have as large, and possibly a larger dose of antitoxine than should the adult, and antitoxine of diphtheria being harmless it is perfectly safe to work on that theory. As yet there is much room for improvement in antitoxine. I have no doubt we will soon obtain the dry product, which we can use in sterilized solution, and which will possess many advantages and no disadvantages. That has been done in tetanus already, but has not been successfully accomplished in diphtheria toxine.

The Application of Forceps in High Presentations.‡

By D. A. Staunton, M. D., High Point, N. C.

The application of the forceps where the head is low in the pelvis is extremely sim-

‡Read before the North Carolina Medical Society, Asheville, N: C., May 31st. 1899.

ple. When in these cases there is no disproportion between the size of the head and pelvis and slight traction only is required to supplement difficient expulsive power, the operation of applying forceps and expediting the delivery is in the hands of any ordinarily well instructed practitioner, perfectly safe to both mother and child. It is very different when the head is arrested at the brim, or high in the pelvis. Then the application of the forceps is an operation requiring much dexterity for its proper preformance, and must not be undertaken without anxious and mature consideration. It is because these two classes of obstetric operation have been confused that the use of the forceps is regarded by many with such unreasonable dread. It should be borne in mind that most of the bad results following obstetrical operations of any kind, are due to carelessness rather than to ignorance or inexpertness of the operator. While most physicians feel that in the practice of surgery they must be painstaking, methodical and familiar with recent advances in surgical knowledge, yet in obstetrical work they are apt to be careless and indifferent trusting that nature will supplement all deficiences and somehow pull the patient through safely. Many who pride themselves upon their scientific precision as physicians or upon their expertness and rigidity of technique as surgeons are nevertheless slovenly and careless as obstetricians.

This anomalous state of affairs may be due to the wide diffusion of the erroneous idea that pregnancy, being a physiological process whose natural termination is labor, there is consequently no special care or prevention necessary. Obstericians can never do good safe work until they learn to regard every confinement as a surgical case with many pathological possibilities to be overcome, rather than as the natural termination of a physiological process. This may seem to some an overdrawn proposition. Nevertheless it is true, though some may have learned the force of it after the time had passed for saving the life of a mother or child. Again, the old half truth that "Meddlesome midwifery is bad" has done much harm by detering obstetricians from acting promply, and thereby serving as an ever ready excuse for procrastination, and at a time, too, when two lives "tremble in the balance." Operative midwifery is a department of surgery governed by the strictest principles and rules of general surgery. Operative precision cannot be attained nor can mortality and morbidity be reduced to the utmost unless practice is based upon broad surgical principles, and the same attention is paid to technique as is in operatives upon other parts of the body. In no department is this more important that in operative obstetrics and in none does disaster follow carelessness and neglect more rapidly and surely. It cannot therefore be too strongly impressed upon all who practice the obstetrical art that a rigid technique is essential and that success or failure will depend more upon surgical cleanliness than upon mere expertness in operating and in no obstetric operation should there be a stricter observance of these rules than in the ones named in the heading of this paper.

Next in importance to a careful technique stands the question of when the forceps should be applied. I speak only of high presentations as where the head is low the indications for the use of the forceps are much more readily determined. Broadly speaking, I would say that as this proceedure deserves to be classed among the major operations, we should never wait till the mother is exhausted, for under the most favorable circumstances a forcep delivery in high presentation is a trying ordeal Engagement often fails to take place because of a faulty presentation of the head or of the body. Again, puerperal convulsions may necessitate the applications of the forceps while the head is still high, in order to bring the labor to a speedy close. These and other indications will frequently lead the conscientious obstetrician to resort to the forceps before the head descends into the pelvis.

The following cases will be of interest as showing the ineffectiveness of nature and the difficulty of delivery: Mrs. W. H. Primipara, age 22, was taken on Thursday morning at seven o'clock. I saw her several times during the day. Pains were slight and dilitation was slow, at nine p. m., gave 1-4 gr. morphine hypo, patient rested fairly well during the night. Friday morning the pains were still feeble though dilitation had advanced to the size of a twenty-five cent piece. The pains continued all day Friday and during the night but were too feeble to engage the head. On Saturday the pains were harder still, the head would not engage. The patient by this time was becoming nervous and showed signs of constitutional disturbance. I now called my associate, Dr. J. J. Cox, and were not long in deciding that labor must be effected in some way. After carefully studying all the ways and means at our command we decided to first try the forceps. The head was still at the brim under complete anesthesia, we succeeded in grasping the head by having the child steadied

by an assistant. Delivery was slowly but successfully effected without injury to either mother or child.

Case 2nd. Mrs. L. J. Prim was first seen on Friday June 4th, '97 at 7 a. m. The progress of this case was almost parallel to that of No. 1, except that the pains were more vigorous from the first, under the most careful watching. By Sunday, the 6th, she was growing very nervous, fever had developed to 101, os. dilated to size of a 50 cent piece. At 7 a. m., I called my associate, Dr. J. W. Long. After examination it was decided to wait and see if dilitation and engagement would not take place. At 10 a. m., the patient was showing such decided failure that we concluded to attempt delivery with the forceps while the head was still at the brim, though Dr. Long expressed the doubt that the head could be grasped. After carefully preparing the patient, under complete anesthesia we succeeded in delivering alive an eleven pound child with no worse accident than a lacerated perineum which was repaired before we left the house.

Case 3rd was where the application of the forceps became necessary to expedite the delivery because of puerperal convulsions. Mrs. Dr. G. Primipara, aged 33, was taken with a convulsion at 11 p. m. I reached her at 2 a. m., found her comotose. Examination showed the head against the brim, only slightly dilated. The husband a very competent physician, was keeping the convulsions under control with chloroform. Recognizing the gravity of the case and feeling from the circumstances surrounding the case an unusal responsibility, Dr. Armfield, a man of large experience, was sent for. After a consultation we decided to stop the chloroform and give tr. veratri viride to control the convulsions, but the husband having that groundless fear that veratri was dangerous would not let me give a full dose (10 drops) so I gave only five drops and the convulsions was not controlled but a few hours, and we decided that delivery must be effected in some way and the forceps was selected; the head proved to be a very large one and much time and strength was spent in effecting delivery, but finally we succeeded in bringing a live child into the world. There is some difference of opinions as to the application of the blades in high operation as to which should be considered the head or the sides of the pelvis. As for my part I pay no attention to the head but apply the forceps with reference to the sides of the pelvis.

Typhoid Fever as Met with in Fayetteville and Surrounding Country.†

By J. F. Highsmith, M. D,. Fayetteville, N. C.

The Physicians in Fayetteville and vicinity are accustomed to seeing cases of continued fever, which apparently come on as a malarial remittent, but are not controlled by malarial remedies, be they ever so well tried. I claim that this type of fever is typhoid, such as we have in this locality, aud to illustrate, I cite the following case; Mr. A. came to my office Aug. 1st, complaining of chilly sensation, aching all over, fever 103, felt reasonably well until the day before consulting me though he had been languid with no appetite for a week. Bowels had been regular, had no headache, epistaxis, general weakness, or any fever until July 31st, the day before I saw him, when he thought he had some fever but was at his work. From this time on for four weeks he had continued fever. When I first saw him I gave him a thorough purgative of calomel 9 grs., bi-carbonate of soda 20 grs., divided into three doses given every two hours, followed in six hours by a dose of salts. From this purgative dose the bowels were moved well. On the morning of the second day I gave quinine sulph. 30 grs., 10 grs. at 5 a. m., 7 a. m., 11 a. m. In the afternoon of the same day at 4 o'clock, the temperature being 105, I gave acetanalide 5 grs., with bi-carbonate of soda 5 grs.,and ordered it repeated in three hours if the fever was above 103. The second dose at 7 p.m. reduced the fever to 102. This plan of treatment, well regulated diet, quinine sulphate 30 to 40 grs., in the twenty-four hours with tepid baths of water and vinegar was kept up for seven days, fever fluctuating from 105 to 100. On the morniug of the 7th, or the seventh day of his illness, I decided to give no quinine, but simply give nourishment and sponge baths, first, if the fever went above 103, if not controlled by baths and kept to 103 or lower, I ordered acetanalide as above repeated every three hours until the fever cooled to 100 or 101. With this treatment the temperature was held down, it not being necessary to give more than two or three doses in succession to reduce temperature from 105 to 102. On the fourteenth day of his illness, the fever at its highest and without any anti-pyretic, at 4 p.m., did not register but 102. I then discontinued the anti-pyretics and did not repeat them in the case. The bowels had been slightly constipated up to this time.

†Read before the North Carolina Medical Society at Asheville, N. C.

I had given several doses of epsom salts with good results. It would give two or three movements with much relief to the patient. The fourteenth day, the tongue being dry and some tympany of the bowels, I commenced on turpentine 5 drops with muiclage of acacia, tablespoonful, and gave this off and on for the remainder of his illness. From the fourteenth to the twenty-first, fever ranged from 102 to 100; from the twenty-first to the twenty-eight day, from 100 to 98 F. I gave a well regulated diet, liquid peptenoid, milk, chicken broth, beef juice, stimulants as indicated. After the twenty-eighth day the patient made rapid recovery, no after sequel.

I report this case not for any peculiar symptoms mauifested or special treatment in the case, but simply to illustrate in a rough way the type of continued fever as it is most common to prevail in our section. All cases are not so mild as this, but would place this as an average case. Now and then will have a case come similar and will have either epistaxis, bowel complication, petechial eruption, but it is seldom to meet with these,and when we do it means a hard fight.

I will now report the following case to illustrate how similar the diagnosis was, and under the same treatment how different the results of treatment were: On August 1st, Mr. B. came to my office on the same day with Mr. A., and with every symptom similar to Mr. A.; came from the same locality, had been drinking the same water, living on the same plantation with him. I gave him calomel followed by saline, then quinine 30 grains in the morning for two days, then reduced to 20 grains per day, and then to 10 grains, dieted him, and on the fifth day he was out, no fever, slightly weak as a result of his illness. In the course of ten days he had entirely convalesced.

It has been my plan in these fevers in this locality to treat them in most cases as malarial fever at the beginning, not knowing in many cases in the beginning whether I had a case of typhoid or malaria, and could arrive at a diagnosis only by exclusion, and taking for granted that typhoid be excluded; then sometimes I don't know what I am treating more than an irregular and continued fever which has to run its course. For many of these cases do not yield to treatment for malaria, yet I think the gravity of the disease is modified or made milder by quinine in the beginning. While on the other hand many of them do not have a typhoid symptom more than the temperature record and that, you will find, to be typhoid in character. Such being the case I often feel that I am abusing or needlesslyl using quinine in many cases and very likely my patient would do better and be more comfortable without it. But how are we to ever know the true cause of the disease? Is it malaria or is it typhoid? Can we arrive at the correct diagnosis without the use of the microscope and an analysis of the blood for a malarial and typhoid bacilli,that we may better know how to direct our treatment in the beginning of the disease? I think, in most cases, by a careful examination of the patient we can diagnose typhoid as met with in this section, from the symptoms which it carries, even though we do not have the clinical symptoms well marked as is taught in text-books. One among the first things I take into consideration is the age of the patient. This disease is most apt to be met with between the ages of 16 to 35 years. The general expression of the patient is a wide awake nervous state, face and lips red, cheeks flushed and eyes bright as if the patient was in the most perfect health. The tongue appears contracted and red around the borders, and on extending it will be tremulous, showing a nervous condition, may or may not be coated, moist and of a fairly good color and may remain so throughout the disease. The skin is usually dry, no moisture about it, as is found in malarial troubles and has not that sallow and anæmic appearance so common in malarial cases. After fever has lasted for fifteen or twenty days the patient will have periods of sweating which are not copious. A petechial, or rose colored eruption is seldom found, and if so, slightly, and indicates bowel complication. The stomach is found very irritable and has to be watched, so much so that often I have thought that I was dealing with a case of gastric fever. The nervous complications are usually mild as compared to the low mutterings or wild delirium of typhoid enteric. Epistaxis, a most common symptom of typhoid, is seldom met with and when it does occur is not grave within itself, but is a signal in the case, and should warn the Physician that he has a stubborn case to treat. The fever is the most marked symptom to govern us in the diagnosis, and in some cases, the only thing upon which we can base the diagnosis, in this locality. The temperature record in most cases is very much like that taught in the text-books on enteric fever. Now and then I have seen in the bowels marked typhoid symptoms, much tympany and distention of bowels, gurgling in right iliac, diarrhœa, followed by hemorrhage, but this is not common and when it does occur the patient is apt to be a new comer, his first or second summer in this ocality. The assimilation of the bowels is

bad and in them seems to be located the disease, and would appear to be a bilious enteric condition, but not such a state as would be looked for in genuine typhoid; still I believe that the conditions exist in the bowels as typhoid, such as we have in this section. I am sorry that I have never been able to make pathological investigations of the true condition of the bowels. If in these cases it is not typhoid, why does not quinine control the disease? We know that quinine does not arrest the disease; but as I have said before in some cases where they bear quinine and it is given in good dose in the beginning of the disease, that it appears to lessen the gravity of the case and makes it much milder, still, it runs its course from three to five weeks, quinine or no quinine. The mortality rate I am not prepared to state, but it is certainly much less than in typical typhoid. As to treatment: get a nurse, Then, first, I support my patient by giving a well regulated and easily assimilated diet. Such as peptonoids, beef juice. chicken broth, sweet milk, butter milk, egg albumen, water. For the last few months I have used less sweet milk as nourishment in these cases, as many of my patients could not digest it. In these cases I have used buttermilk, chicken broth and beef tea instead, with much better results. I direct my patient to drink water freely for I believe it to be a safeguard to the various organs, and helps the excretory organs to throw off the poison of the disease from the system. Hydrotherapy, in the full sense, I have never used in treatment, but I believe when the surroundings are suitable, it is good treatment for *some* cases *bnt not for all*. As to drugs in the beginning of the disease I usually give colomel 8 to 10 grs., with soda when first see patient, if indicated; repeat the dose in four or five days, I keep the bowels well open. Like to have from two to four movements in twenty-four hours. I have often found that a dose of salts when the temperature rises is much better than an antipyretic. When there is no prostration from numerous actions, I think it best for the bowels to be purged off and on for the first two weeks of the disease and even throughout the disease in most cases purgatives may be kept up. Where stomach is sensitive with torpor of the lower bowel, enemas of warm water are of great service. I find that colomel in small dose, 1-16 of gr., with soda bi-carb. 1 gr.. given every hour or two, kept up from twenty-four to thirty-six hours at a time, to be of much benefit by its antiseptic or alterative effect bringing about better secretions of the digestive tract. I use the calomel in this way after the first ten to fourteen days of the disease. Quinine I most invariably use in large dose in the beginning of the disease; first seven days. If it has no influence over the fever I discontinue its use altogether save for its tonic effect in some cases. The "Woodbridge Treatment" I have never used, but am favorable to its modification. Certainly, so far as to small dose of calomel and thorough purgation in the beginning of the disease. After the first few days, when the fever has assumed its regular course, if there be any tympany, the tongue dry and indicates its use, I give turpentine and keep it up regularly throughout the disease. I also use it as stupes to the bowels. In some cases I have used salol with apparent good results, while in others, have used it with no benefit. Among many other remedies I have used Nitro-muriatic acid, phosphate of soda, tincture of iodine and carbolic acid (1 to 2) and many other remedies. But first, last, all time throughout the disease, look after the lungs, heart, stomach, liver, kidney and bowels. And see that the proper food is used with as little residual matter as possible and that the assimilation be carefully watched and the strength of the patient maintained. This is the most important, as has been my experience. And if your therapeutical remedies have not this in view then they are useless. I have found no specific or true remedies that never fail, but each case has to a certain degree to be treated as its own peculiarity demands. In conclusions let me ask are the cases of contineed fever, which we have in this locality, typhoid peculiar to this section; are they not continued malarial fevers, which has to run its course and is not influenced by cinchona salts, or is it typhoid fever modified by malarial infection, or the result of a combined infection? It is on this differential diagnosis I would like to be able to give a microscopical examination of the blood of a number of cases, such as we have in this locality, that it may enable us to tell which is dependent on malarial infection and those which are typhoid, or a combined infection. The time has come when every practicing physician should be prepared to make microscopical examinations of the blood, that the diagnosis in these cases may be made easy and positive.

DISCUSSION.

Dr. O'Hagan.—I have not heard a paper on typhoid fever in which the advice was more salutory and eminently fitted to almost any variety of that fever which we generally meet. I think that the ideas advanced by Dr. Woodbridge, which favor elimination, have more or less tinged the

doctor's paper, and I think correctly, for notwithstanding I think that Dr. Woodbridge's treatment is utterly impossible to be carried out in this country for various reasons, nevertheless the principle underlying it is elimination and antiseptic. It seems as though the doctor might possibly gain something by hydro-therapy, in the use of water not only internally but externally, accompanied by friction. I have enjoyed the doctor's paper very much, and I think a patient would be safe in his hands if he had typhoid fever.

Report of a Case of Encephaloid Carcinoma of the Lung with Tuberculosis.‡

By Chas. L. Pearson, M. D., Asheville, N. C.

Mr. K., age forty-one years, male. Occupation, stage electritian. Family history, mother lived to an old age, father was killed in the war of the rebellion, grandmother on mother's side died of cancer, two sisters of his mother died of cancer.

The history of the patient prior to the time he came under my care was as follows: On November 5th, 1898, patient began to feel pain in left side, pain continued more or less until December 26th, when he was compelled to stop work for about one week. On January 2nd he resumed his work but was still suffering considerable pain. On January 16th patient took to bed suffering severe pain and considerable temperature as reported by his wife. On January 25th patient was taken to Maryland general hospital, Baltimore, and on January 31st was apirated for supposed pleuritic effusion, result one-half pint amber-colored fluid was withdrawn. On February 10th he left hospital and resumed his work as stage electritian, travelling from Baltimore, Md., to Cleveland, Ohio. He continued at his work for about three weeks when the pain returned, also having temperature, a dry cough, and night sweats. After consulting Dr. Hamilton South, of Detroit, Mich., who diagnosed an existing tuberculosis he was advised by him to come to Asheville. Patient consulted me on March 17th and at that time his temperature was 101, pulse 115, respiration 24. Patient complained of pain over the left lung, was suffering considerably from dyspnœa, also a dry hacking cough and from night sweats.

On physicial examination I found on percussion there was complete dullness, posterially over the left lung as far down as the seventh rib, below that region the percussion note was perfectly flat. Anteriorly the percussion note from the apex to the nipple was dull and from nipple to the diaphragm was tympanic; auscultation: bronchial respiration over apex anteriorly, over remainder of lung vesicular murmar was entirely lost. Tactile fremitus was entirely absent. The heart was displaced 3 1-2 inches to the right, the apex beat to the right of the medium line and in the epigastric region. Patient was very little emaciated, had a good appetite, but had great difficulty in retaining his food. He had a dry persistent cough except in the morning when he raised considerable prune juice expectoration. Up to this time he had had no hemorrhage. His sputum examination showed from four to fifteen bacilli to the field. His condition remained unchanged until April 5th when I called Dr. F. T. Merriweather in consultation and we decided upon an exploratory aspiration. No fluid was obtained and the results were negative. On April 10th patient had a severe coughing spell during which he coughed up a piece of necrosed lung about one by one-half inch. This was accompanied by quite profuse hemorrhage. During his entire illness since March 17th patient had profuse sweats and showed every sympton of being septic and while we were not successful in finding any pus or fluid of any kind at our first aspiration we felt confident from his condition and the physical signs that there must be pus confined either in the plural cavity or within the lung. On April 18th Dr. C. P. Ambler was also called in to the case and on the 19th we decided upon another exploratory aspiration, at which time the needle entered a cavity from which we obtained several ounces of bloody fluid, consisting of broken down material which under the microscope showed no bacilli. After our first aspiration, finding no fluid of any kind, we suspected a malignant growth. From April 19th his temperature decreased, while his pulse and respiration steadily increased in frequency. His dyspnœa increased and about April 25th he developed symptom of pressure on the æsophagos with great difficulty in swallowing and the last few days of his life he was practically unable to swallow. The pain particularly in the region of the scapula and spine grew steadily worse so that we were compllled to resort to large doses of morphia. Patient died on May 2nd.

AUTOPSY.

Left lung firmly adherent to diaphram

‡Read before the North Carolina Medital Society, Asheville, N. C.

and chest wall over its whole extent. Left lung three times the normal size and perfectly solid except a large cavity. The lung itself was filled with nodules making up the tumor mass. Right lung near its root was found one small tumor about the size of a walnut. Remainder presented a healthy appearance. No other signs of a malignant nature were found in any other organ. Dr. F. T. Merriweather kindly mounted a speciman saved and after subjecting it to the test of the microscope found the nature of the tumor to be an encephloid carcinoma. Dr. Ambler also took a speciman of the contents found in the cavity and examined for and found tubercle bacilli.

Annual Oration---Practice of Medicine.‡

By Dr. H. S. Lott, Salem, N. C.

Gentlemen of the N. C. Medical Society:

I thank you for this honor. The pleasure of it was only equaled by the surprise. Ladies and gentlemen, citizens and guests of Asheville, I thank you for your presence, as for the privilege of standing before you, and trust that you may be in some measure repaid for the coming. I fear to attempt to offer you anything new, lest, like the clown in the circus, I get kicked out, (I tried that down at Charlotte); I cannot offer you anything original, "for there's nothing original in me, except original sin," but the practice of medicine, like the story of love, is ever new, ever near to our hearts, and of equal interest to both profession and laity The work is begun while attending lectures, for as the adult is but the grown-up child, so the practitioner of medicine is but the grown-up student. The college days are the formative days; all is new, and strange, and wonderful; and as the infant brain gradually awakens to the realities and the magnitude of life, and of living, so the student of medicine, as he begins to comprehend the elementary and fundamental teachings of anatomy, physiology and chemistry, the trident that forms the base of, as it points the way to, the complete structure in process of erection, he awakens also to the magnitude of his task; and lifting his eyes to the future, can see on its misty horizon the first faint rays of the dawn of a life of usefullness and of science. The life of the student of medicine is, I take it, much like the life of the student in other branches of education; he may work much, or shirk much, as the trend of his mind goes; and yet while the personality of the genius student may be the same, in the studies there is a difference. It is not cold-blooded theoretical deductions, figured out on blackboards, which constitute the day's work and the night's study of the student of medicine, but nature's masterpiece, the human organism, the wonder of which never ceases and is never fathomed, from its beginning, in infinitesimal protoplasmic elements, to its completion in the anatomically perfect human being; endowed with life, and intellect, and soul. During each day of his work the student of medicine, if he possesses the qualities essential to the successful practitioner, awakens more fully to a realization of the fact that it is vital elements, flesh and bone, and blood and nerves with which his life-work has to deal. The lecture room is no longer tedious, but each hour, and each lecture brings fresh food for thought, and new problems, relative to health and disease, for individual study and solution. The chemical laboratory, which at first bewilders with its multiplicity of uncouth implements. becomes the vantage ground on which invisible elements meet, to be turned and fashioned by human skill into intelligible shape, and applied to the comfort and well being of human lives.

The dissecting hall, with its ghastly array of gaunt cadavers, entered at first with dread akin to loathing, looses its horror, which has followed us even in our dreams, and becomes possessed of a fascination which can be no more resisted than defined. There is no death there, and though at work among the ashes, each ember is fanned into life by imagination's healthful glow, and in seeking the source,and tracing the course, of muscle, artery and nerve; and in the minute dissection of vital organs, the wonder is that the vital spark is gone, and our subject no longer endowed with the power to think, and feel, and suffer. The clinic is the student's rest time; when under the wise and kindly guidance of the teacher, tension of theoretical study is relaxed, and he comes in touch with the patient, to "try his wings" both at fathoming human ills and reducing the science of medicine to the art of healing. Thus the life of the student of medicine, while full of work, is also full of pleasure, that pleasure afforded by the earnest pursuance of an accepted life work; and if the mettle of the man rings true, the day on which he receives his diploma will find him well equiped to enter the ranks of his profession. The ranks are always full, but they are likewise always ready to welcome the beginner, and extend to him the right hand of good-fellowship

*Read before the North Carolina Medical Society at Asheville, N. C.

and I believe that it is best for the recent graduate to go to work in the general practice at least until he has developed his tendencies. I remember the time when I was trying to decide between going to work and going to seek further instruction, (I had just about enough money to buy a horse, that is a small horse,) I asked the advice of my much beloved teacher, Dr. Joseph A. Eve, and after having discussed various phases of the question, his opinion was given in these words, "Go to work and study, going to Europe has made more doctors fools than it has ever made fools doctors." The remark, strengthened by the purity of the man who made it, impressed me much; therein lay a distinction between substance and shadow. In the practice at the bedside, and furthermore at the bedside of the patient who has applied to us for help, and for whom we feel morally responsible, the best clinical teacher is obtained. When we get a diploma we are just fitted to study intelligently. The man who feels that when he has graduated his need for study has passed, had better turn to the plow, or the woodsaw, or indeed any other honest calling; 'twere better far, both for his profession, his patient, and himself.

In selecting a location, he is a very fortunate man who finds a place where he will be content to begin and finish his life work. The man who is restless, and impatient for quick preferment in medicine or surgery, and moves from place to place to get it, most often defeats his own aim, and lessens his chances of eventual success. The farmer who plows the ground, and runs the furrow in one field, and leaving it, drops the grain in another, reaps a short harvest. Like Rome, professional character and reputation are not built in a day; but they come, with steps as sure as they are lagging, to the man who is worthy of the reward. And furthermore they come hand in hand, and are both essential factors to success. Professional reputation may be gained through native skill and mental talent, professional character is only gained by purity of life and motive. Reputation is the binding, character is the book; reputation may bring the patients, character holds them. The first years, the waiting time, constitute the most trying period of a professional career. They are filled with trials, and temptations, and disappointments. The men on whom fortune smiles early, bringing to them a living practice, without the struggle, through either the decent of a father's mantle to their shoulders, family influence, or other of her fickle freaks, are among the favored few. To the large majority it comes through years of patient work and patient waiting. In starting out in practice the chafing against the bit is hard to overcome. To sit quietly in the office waiting for calls, with very few dollars in the pocket, and expenses going on in spite. To see the busy doctors on their rounds, doing the work, while we sit idle, is a trial well worth living through, and if bravely borne, yields fruit well worth the waiting. The time is not wasted if properly spent, and the discipline is just what we need. Selfpossession, faith in his calling, and faith in his own resources, are most essential to the practitioner of medicine. The man who possesses them has ample opportunities for their cultivation during this period and will be prepared to meet successfully the first emergency that arises. The man who possesses them not will be found wanting in the waiting period, and wanting in the work. Temptations come from every side, and are not confined to those which come through a native fondness for society and its dissipations; for while these are alluring, and may lead astray, they are most often refining and elevating. The true physician is the doctor everywhere and every when, always ready with brain and heart and hand; nor does his calling debar him from social recreation. The greatest temptation from that source, and the one, if yielded to, most damning and destructive to the physician's moral character and professional honor, seeks him in the quiet of his office, with gloved hand and gold-lined palm, and pleading tear-stained eyes mayhap, "just a little medine, Doctor! and a little 'treatment,' and please remember that your fee is no consideration." Will he yield, and bear the scar of professional dishonor throughout the balance of his life? The need is urgent, maybe, office rent is due, and the money is at hand just for the reaching; and it is so simple, and really seems to be an act of humanity. Ah, yes! I know the temptation; but if he is a true man, and a true physician, with the honor of his profession as dear to him as his own, he will say No! and the "the fee" will, indeed, be no consideration. Such, and lesser ones, constitute the temptations from without. Within the pale of the profession there are many, living because countenanced, and equally ruinous to the physician; if not to his honor to his dignity, and to the scientific persuance of the practice of his art.

The cry of the medicine vender is not confined to the streets; he enters the physician's office with much elegance and suavity; appareled in the latest style both in person, in speech, and at all ages, from the beardless recruit, who has just shed his

pinafores, to the dignified veteran, who had "such an extensive practice" that he must needs leave it, forsooth! and go to traveling in the interest of a "pharmaceutical establishment." And——"my dear doctor-we make the best, the very best, the products of no other house can compare with those we offer you. We visit the physicians only, and introduce our elegant preparations strictly on their merit and only through the medical profession. And this, our special and latest product, (full formula on the label) is working wonders. Where it is known the profession simply cannot do without it; and it cures, always. These samples I will leave with you, and to more you are welcome just for the asking. When prescribing, doctor, there is so much fraud, kindly specify our goods, and the results are certain." The recitation is well taught, and beautifully rendered, most pathetic in fact. And on leaving, "your full address, doctor, Ah! thank you, this will bring you, each month, our publication with exhaustive reports, from the most prominent men, on the successful use of our preparations." "And remember please, that we will gladly furnish you with literature and samples at any time." And they are furnished, and their pamphlets form the text book, and their nostrums the medical agents of numbers of practitioners. It is so much easier to let some one else do one's thinking, and to use a remedy that is known to be the right one, for it says so on the label. And then they are so safe too, nicely put up in little boxes; and the little pamphlet tells you just when to give No. 1, and just when to give No. 2, and all we have to do is to look at the numbers, never mind about the patient, the little pamphlet says that hundreds and hundreds of cases have be treated by them, with never the loss of one. Now, in order to find a very large number of the authors of these valuable reports, you would have to conduct your search with a lantern in the daytime. And the remedies lauded, most often under mysterious and high sounding names, are simply standard drugs, that are used by all intelligent physicians each day in their practice. Let the pharmacist devote his energies to the securing and preparing of pure and unadulterated drugs, and not assume the office of clinician and teacher of therapeutics; the instrument maker to the making of good instruments, and leave their use, and the "post-operative sequelæ" to the surgeon. Medical literature offers a maze through which the young practitioner passes in bewilderment, and the only wonder is, that he does not stray further more often. Just as untrammeled freedom of the press publishes crime and immorality, and sows broadcast their seed in brains and hearts found fertile for the growing, so do unrepressed and mongrel medical journals teach and foster unsound principles and practice of medicine. The ideal medical journal, as the ideal physician, should be free from advertisements, and free, also, from solicitations for patronage. The want of to-day is not for literature on subjects medical and surgical, of that there is an abundance; but for the power to discriminate between good and bad, the ring of the false, and the ring of the true. Like all human effort, a large mass of it sinks into restful oblivion. Just here and there, untarnished and untattered by time's progress, stand out in bold relief the work and thoughts of men endowed by nature with the power to read her lines correctly, and follow close their teaching. The best literature that we have to-day, most sound in pathology, accurate in diagnoses and helpful in treatment, is found in the works of the older writers, men with their working time behind them, and a goodly number of well rounded and well ripened years of experience and observation from which to draw.

Systems of medicine, compiled from many sources and many authors, and shaped into a number of immense volumes, make quite a formidable array on the shelves of a book case, and are quite profitable, no doubt, to the compiler and the publisher; but I question much their value to either student or patient.

Such works, together with most enticing terms of purchase, are presented to the physicians throughout the country by the well tutored representatives of lay publishing houses. Just think of it! Come all the way down from the metropolis, bearing all the expense and distress of travel, for no profit —mark you—but solely to offer to benighted doctors the "very latest work" by some embryonic professor, that their house is "pushing." Ask one of these gentlemen for a standard work, by a master in medicine or surgery, and his face is a study in its blending of sympathy and pity; "my dear doctor! we don't carry that, it is out of date; the works that I offer you are the latest. And the engravings, doctor, see the number of fine engravings."

Now the surgical picture book, while having a sphere of usefulness, portrays rather the financial resources of a wealthy corporation, than the native skill, wisdom, and conscience, the three essentials, of the surgeon. These are best portrayed either through personal contact, or in close study of the volumes which set forth the spirit of the man, in the writings of the life work.

However trying it may be to the physician's mental and moral fiber, the waiting time passes and the calls begin to come. The first call marks a crisis which is ever remembered. It is the culmination of hope deferred, the beginning of the end. It may be to the mansion, but the chances are very great that it will be to the humble cabin, and in either case the issue is of vital import.

With the care and precision which mark the well trained student, and guided by the lights of to-day which give a knowledge and understanding of obscure pathological condition, the patient is examined and a diagnosis made of appendicitis. The trouble has become quite the fashion, and 'tis rather good fortune to have been called to a case, if it can be brought to a happy termination. The patient is suffering, the family anxious, and the skill, wisdom, and ability in general of the young attendant much shadowed by doubt. What course of treatment is it best to pursue? The teaching and literature of to-day, which have been studied so well, present a mottled and conflicting mass, seemingly at war with itself, and failing to guide straight and true.

At one elbow stands Prof. Salts, with a string of extras to his name as long as your arm and shaped into a nice little pyramid underneath, who in his latest writing says that appendicitis is not a surgical disease at all; but it is due to a germ which makes its home in this little intestinal prolongation and its immediate neighborhood; and if the doings and feeding of the possessor of its habitant incur its displeasure by deranging its medium of existence. mueh trouble ensues, and the culprit is in danger of capital punishment, which, however, may always be averted by medicinal treatment, tending to expel this ill-conditioned and ill-tempered inhabitant, and create a proper medium of existence for its successor. Surgical interference is practically criminal, and never indicated. And then a long "series" of cases are cited in which the diagnosis was sure, all were treated with salts and calomel, and all got well.

At the other elbow stands Prof. Lancet, with an equal number of attachments, who says that all cases of appendicitis are surgical cases; delay is dangerous, aye even criminal, and should be subjected to operative interference early. The exciting cause, in most cases, is a foreign body, having been introduced either by way of the stomach, or formed within the gut as an enterolith, and its removal, together with the inflamed and often sloughing appendix through an abdominal incision, the only safe or rational procedure. Why? quite recently there appeared in a medical journal, an elaborate article, prepared no doubt, by a member of the firm of Lancet, Duck Pants & Co., strongly urging the removal of the appendix vermiformis in early infancy, and recommending to its securance the establishment of a law like that enforcing vaccination.

Now in the face of such conflicting testimony, from presumably authoritative sources the position of the man who has not years of experience and observation from which to draw, may be much embarrassed. That co-workers in the field are so widely at variance is most unfortunate. The fundamental laws underlying and governing medical and surgical science, are as fixed as were those of the Medes and Persians, cleaving close to nature's lines. Not wasting precious time in vague theories, but striving to aid nature's efforts at throwing off disease, while they also strive to solve her mysteries. 'Tis the expounders of the law who vacillate, and not the law. That "doctors differ" is a much favored saying among the people, and often reflects discredit upon the science of medicine, when the real fault lies in the want of equal powers of observation, and equal training of its representatives.

Finding himself thus at sea, between the two extremes of authoritative opinion, which keep each shore in restless tumult through the splash of their discussion; the man of resource, sustained by native skill and native wisdom, drops into the strong, deep middle current, which traces its source to the masters in medicine and surgery, and pursues its way from century to century, unswerving as unchanging, and bearing on its broad and mighty bosom the fixed and faithful laws which contribute to the prolonging of human life, and the relief of human suffering.

Thus guided the man of doubt becomes the man of action. The first care is for the patient, whose vitality and environments are taken into account, and the course of treatment advised which promises best. Each case is a law unto itself, and no fixed rules can be established or followed.

A simple catarrhal appendicitis, or as correctly speaking the perityphlitis of Gross, involving the appendicular region, is often tided over by rest, salines and proper diet, without the need for alarm. Or, on the other hand, the case presents the type so perfectly pictured by Dr. Hunter McGuire, with a probable foreign body, the formation of pus abscess, with a likelihood of perforation; then to open the abdomen nearest the seat of inflammation, let out the offending matter and drain the cavity, is beyond

question the right course to be pursued; and

"Do thy duty, that is best:
Leave unto thy God the rest."

Such issues, with such problems for solution, will present constantly in the work, and to think and act promptly is most apt both to save the patient and hold the confidence of the people.

The case terminates favorably, the patient gets well, and the diagnostic skill and successful treatment of the physician are much talked and lauded by the family and neighbors. Or, wait! the patient does not get well; the life line has been crossed, and the case terminates fatally. Now, the skill in diagnosis has been equally great, the course of treatment adopted has been equally correct, and yet the issue is most distressing to all concerned; and not least so to the physician. He has been guided by his lights, and done his best, aud yet the shadow of a failure rests upon him. Each step in diagnosis and in treatment is reviewed, and while found to be abreast of the best teaching of to-day, and to have just suited that particular case, he questions their wisdom; and to the disappointment and discouragement are added the pain of feeling that possibly some other course would have been best pursued, and might have saved the patient. Do the people know what the doctor suffers in the loss of a patient? They are his judges, they make or mar his future. A few will censure his boldness, many will question his skill and ability, but the large and ruling number will weigh the matter justly. Into the balance with reputed zeal and professional ability the character of the man is dropped; and if sound and pure, the swing is in his favor. Failure, while cruel, is ofttimes a better teacher than success. The doubt of self, with its questioning and study, are fertile paths to plains of broader knowledge. As to adverse criticisms, the doctor gets his share of them. No matter how earnest his work, or how pure his motives; and

"Let any man once show the world that he feels
Afraid of its bark; and 'twill fly at his heels;
Let him fearlessly face it, 'twill leave him alone:
But 'twill fawn at his feet if he flings it a bone."

Thus to pursue and to comprehend the practice of medicine, in all the breadth and fullness of its scope, the physician should bo a man of power, mental, moral, and physical.

Mental ability, with quick conceptions and ready sympathies, fits a man to hold postion in the foremost ranks of his profession. The case pictured is but a drop from the mighty ocean. Throughout the working time, like problems, medical and surgical, for individual solution, are coming up each day and hour. In every branch of the work, and the general practitioner must have a knowledge of all; theorists form a large and also a valuable school, in that their searchings and controversies often lead to truth. But theory must be reduced to science, the kernel must be freed from its shell, before it becomes the mighty oak; and upon the general practitioner, with greater powers of observation and a broader field in which to use the power, mostly devolves this task.

The advances of today along all lines of our profession, are most wonderful. The microbe hunter,crying Germs! Germs! and waving aloft as he runs his barber's banner, fresh dipped from the many-hued solutions, has done a great and lasting work; *he has found the germs, and can only see his find;* but he has taught us to be clean; and if to our minds it is still a question whether the germ is a *cause* or a *result* of its medium of existence, having gained the house-top, we should not despise the ladder which has put us there.

To preach and practice cleanliness belongs equally to all branches of our science, and while through its medium the advances in surgery, and especially in abdominal surgery attract most admiration and wonderment, the field for teaching and guidance to the same end is equally broad in the general practice.

Tuberculosis, Syphilis and Cancer,which in their various manifestations constitute the greatest scourges to humanity, have their origin in filth, either of person or environment; and whether the germ exists before or after the establishment of its medium, the preventive lies in cleanlinesss.

The same principle underlies the latest and most scientific treatment of all diseases with which we have to cope. In autointoxication, with all that the term implies, we recognize the chief source of danger to the vitality of the patient, and in stimulating the emunctories, and keepimg up nutrition we also recognize the best means of ridding the system of the accumulating poisons,and of preserving the vital spark.

It is just here that the serum therapist, heralding his theoretical antidote, comes into clash with the true scientist; the man who does not take to each new path that offers, because it is bright, and easy, and diverting. Nor will he either, without knowing well the reasons, inflict upon an organism laboring under a self-endangered poison, which taxes to its fullest the resisting and eliminating power, an additional one of even greater and more deadly intensity.

The electrician subjects both himself and a most valuable therapeutic agent to the criticism and ridicule of intelligent surgeons, by reporting a "long series" of cases in which, under the magic influence of the current, huge fibroids have melted like snow 'neath the summer's sun.

Such aberrations, gentlemen, are most innocent in origin, and not intended to misguide; but are simply prima facia evidence of a want of equal training, and of equal powers of observation in the authors of their being. And furthermore, they lend much to establish the fact that the true sicentist is not the isolated and pedestalled myth that current opinion mostly holds, but a living reality, in and out among the people every day. The man with the eye to see and the wit to grasp nature's processes, bearing in mind the essential to life; and possessing the wisdom that tells him when to aid, and when to leave her to her doings.

In his moral character the physician forges the link that binds together the profession and the people. Strip the man of moral strength and moral purity, and though he be possessed of the highest degree of skill and wisdom, the picture has lost its glow, and becomes one from which both people and profession shrink. The duties of the physician are such, and through them he is so intimately associated with the most sacred ties of heart and home, that his personality becomes a household factor. His help and counsel are sought and trusted; and even in times of health, or trifling ills, "what the doctor thinks" is an element of no small moment in deciding questions both of duty and of pleasure.

Throughout prolonegd ordeals of trying sickness, when hearts and brains of friends and relatives are racked with pain and apprehension, the family physician becomes the stay and guide of all. His coming is ever welcome and his presence gives strength and hope.

In daily contact with patients the moral fibre of the physician is stoutly tested. There is a strong tendency on the part of some people, who constitute a fair per cent. of the doctor's clientelle, to make a diagnosis of their ailment, and even to formulate a line of treatment for the same, and then apply for professional endorsement. Now to cater to their demands would be most culpable, while to find and meet their needs, both wisely and kindly, offers a problem which is at times most difficult.

In the ranks of the profession it is not science, but moral purity of life and motive that makes the front invincible. The paths of earnest and faithful workers are often widely divergent, and their deductions widely at variance, but each is striving for the same end, and from each is culled a grain of truth, which, dropped into the store-house ready garnered, adds to the richness from which all may draw, and also adds a link to the ever-lengthening and ever-strengthening chain of professional love and unity.

In personal contact with fellow physicians, each man has a moral influence. We seldom come in touch with a man from whom we do not learn something, either to cultivate or avoid. To our seniors we look up with admiration akin to reverence. They have what we want, the skill, the wisdom, and — the practice, and it has been my experience to find them ever ready to lend a helping hand, and give the word of counsel and guidance of which we often stand in need. 'Tis not so much the patients that they send us, as the "word in season" dropped here and there in soil rich of their tilling, that lets the mantle gently down to the shoulders of their successor as they relinquish the work, and brings with it the confidence and patronage of the people.

Physical strength and power of endurance are to the physician as paint and canvas to the artist's dream. Without them the vision lives in eye and mem'ry only, nor could the world either share, or be bettered by its power and beauty. With them, from tenderest hue to full and glowing color, the canvas portrays the artists inspiration. 'Tis a life of doing, not of saying; and in the physical man lies the foundation to the superstructure. Strength, as of a man; and gentleness like unto a woman, are attributes peculiarly essential to the physician. Each fiber of nerve and muscle is trained and adapted to its work; ever under control, at command of the brain's supreme direction, and always with strength to spare. With the gentleness of the woman, the new born babe is washed and dressed, and laid in its mother's arms. Or, as the chance may be, with the finest co-ordination and adaptation of muscular movement. the most trying surgical operation is done.

The loss of sleep (burning the candle at both ends), the hurried meals, the long hard drive through rain, and mud, and —— the collecting, all tax the doctor's physical strength and powers of endurance to their utmost. There is no hour that he may call his own; all time and skill, all power of brain, and heart and hand, belong to his profession and his patients.

"Therefore though few may praise, or helk, or heed us,
Let us work on with head, or heart, or hand,
For that we know the future ages need us,
And we must help our time to take its stand."

And the patients love "The Doctor," and when the task is done, and the life is spent from each house comes the sorrowing sigh:

"But oh for the touch of a vanished hand
And the sound of a voice that is still."

Antiseptic Midwifery.†

By W. W. McKenzie, M. D,, Salisbury, N. C.

It has long since been ascertained that puerperal septicæmia is due to a poison which enters the system through the genital tract, as such or is produced there by a substance coming in from without.

It is also a settled fact that in almost, if not in all cases, by the local use of certain measures and drugs, we can prevent puerperal septicæmia. It can furthermore be said that the producers of this poison are certain microscopical fungi, which have been found on the wounds of the genital canal, in the blood circulating in the veins of the living patient and after death, in almost all the great cavities, exudations, &c. The most dangerous of these, it is said by those who should know, are the round micrococci in chain-like groupes, but beside them are found single and double round micrococci and the common rod-shaped bacteria of putrefaction. Chains of micrococci similar to those of puerperal septicæmia are found in erysipelas, scarlet fever, diphtheria and pyemia, and so far it has not been possible to differentiate them in these clinically different diseases.

The poison causing puerperal septicæmia may be derived from different sources, such as patients suffering from the same affection; patients suffering from suppuration or decomposition of tissue; patients suffering from zymotic diseases, and from putrefying substances.

The contagiousness of puerperal infection is universally admitted. The only mooted point is whether it is essential that the microbes be carried from one patient to another on solid objects, or whether they may float through the air.

That the source of puerperal infection may be suppuration was pointed out by Semmelweis as early as 1847. Students who had examined a patient with a cancerous ulcer of the uterus caused puerperal fever in and death to fourteen women, and the case of Dr. Rutter, of Philadelphia, who suffered from ozena and had 45 cases of puerperal septicæmia in his own practice, in one year (1843), is one of the most remarkable instances of this kind. It is easy to understand now how by touching his nose with his fingers, Dr. Rutter brought staphylococci and streptococci into the vagina or the uterus of his unfortunate patients. A French physician who had delivered eight hundred women without the slightest infection, was seized with suppurative adenitis, for which he wore a drainage tube. Within three weeks he had three cases of puerperal septicæmia. A dentist, Dr. Redley, called attention to diseased teeth in doctors and nurses as a possible source of puerperal infection.

All inflammatory puerperal diseases are due to infection, such as cellulitis, metritis, and local peritonitis, the proof of which is, that they almost disappear and entirely change character, when the antiseptic occlusion treatment is used. If no poison from without found its way into the body of the pregnant or puerperal woman, few of them would be sick after delivery. In the vast majority of cases the infection takes place by absorption through the wounds of the genital canal, but not exclusively. In most cases the poison is brought into direct contact with the genitals by the hands of the doctors, widwives or nurses; by instruments, sponges, rags, cotton, oakum, or other substances, but it can quite as well be suspended in the air of the rooms. Dupaul reported the case of a pupil-midwife who, while washing the genitals of a patient affected with puerperal infection, felt an unpleasant sensation, was taken sick in the evening, and died on the third day with all the symptoms of the most characteristic puerperal fever. The diagnosis of puerperal fever was confirmed by the autopsy; she was found also to be a virgin and not menstruating. The natural inference is that she inhaled through the lungs the poison that caused her death. Such a case may be unique, but it ought, nevertheless, to make us a little reserved in our expression about the way the poison of the puerperal septicæmia enters the system.

The infection will, of course, be most likely to take place during the manipulation of delivery, but it may likewise occur before and after. Thus we sometimes, although rarely, find fever before delivery, and, on the other hand, septicæmia may develop at a period when, as a rule, all danger is passed.

The mortality from puerperal fever before the use of antiseptics in midwifery, was simply enormous, rate being about 10 per cent., but now, since the adoption of proper antiseptic measures it is only ½ of 1 per cent. Before the introduction of antiseptic measures puerperal septicæmia used

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to reign in so-called epidemics. With our present knowledge we can, as Fritsch aptly puts it, "as little speaks of an epidemic of puerperal fever as of an epidemic of gunshot wounds the day after a battle."

I will be brief in indicating the historical developments of antiseptic midwifery. The first who understood the septic nature of puerperal fever, and instituted an antiseptic prophylaxis (by means of chloride) was Semmelweis, of Vienna, in 1847. Still our present highly developed antisepsis is not derived in a direct line from him. It was first when Lister, building on the researches of Pasteur, had created antiseptic surgery (1866) that Stadfeld (1870) tried to adapt his treatment with carbolic acid to midwifery, and he was soon followed by Bischoff, of Basel, and Fritsch, of Halle. From that time the use of carbolic acid in obstetric practice spread rapidly over Europe and America. But another period was inaugurated when Tarnier introduced bichloride of mercury, which he recommended in a paper read before the International Medical Congress in London in 1881, and this treatment received new impulse through the experiment of Koch of Berlin, and the introduction of it into surgery by Schede of Hamburg.

The bichloride of mercury, as a preventive and curative agent, was then introduced (1883) in many lying in hospitals. In America it was first introduced by Garrigues in the New York Maternity Hospital on the first day of October, 1883.

This is the chief drug used by obstetricians, but some still prefer carbolic acid, while others use nothing. The latter consequently are continually furnishing the undertakers with plenty of material, I know of a practitioner who, during the last six months, lost five cases—two the same day —from puerperal fever. This practitioner pretended to use antiseptics, but he didn't use them right. There is a right way and a very wrong way to do all things. In this case the wrong way was the easiest, and seems to have been used to perfection.

I know of still another physician who lost four or five cases in succession. I am glad to say that neither of the physicians live in my town.

Insurance reports show that all deaths in women between the ages of nineteen and twenty-nine, more than eighteen per cent. and between twenty-nine and thirty-nine, thirteen per cent are due to puerperal causes. From sixty-five to seventy five per cent are attributable to sepsis. It is fair to assume that these statistics have to do almost entirely with a class who are deliveed outside of hospitals. Thousands of invalid mothers to-day owe their impaired health to the milder grade of sepsis in childbed. Now are we going to allow this to continue when we can prevent it? Certainly not. There are a number of physicians to-day who, when you mention antisepsis and asepsis, turn their noses up with disgust and say "nonsense, there is nothing in it." But I am glad to be able to say that the majority of physicians do use antiseptic measures, consequently we rarely hear of a case of puerperal septicæmia. Only one of my patients ever suffered with this terrible disease, and she was one of the contrary kind. There was a slight laceration and she would not let me repair it, nor allow the antiseptic douches to be used, so she died very promptly on the ninth day after confinement.

Coming now to the preventive treatment I will confine my remarks to private practice, as we of course cannot do every thing as neatly, &c., as they can in hospitals and our patients have to be treated at ther homes. But we can use the same antiseptic precaution if not as neatly, as in hospitals. In well-to-do families we should choose a large, airy, sunny room, and as far as possible from the water closet. In the dwellings of the poor you will have to do the best you can. Select the best room in the house and have the best ventilation possible. In my obstetric bag I always have a jar of green soap, bichloride of mercury tablets, carbolic acid, a sterilized apron and Kelly pad (also previously sterilized) nail brush, fountain syringe, forceps, scissors, sutures, needles, ergot and chloroform. Upon arriving at my patient's house I proceed at once to scrub my hands and arms well, having my sleeves rolled up above the elbow and then bath them in bichloride of mercury 1-2000. I have the nurse to do the same. Next I direct the nurse to give her an enema, then have her to bath all parts liable to be touched during the delivery with bichloride solution. I then give her a vaginal douche whenever patient has leuchorhea. I make as few examinations as possible, and always before and after each examination I bath my hands in a 2-2000 sol. bichloride of mercury which I always have in a bowl or basin near me. I have the Kelly pad placed under patient after the nurse has bathed her, as I have before mentioned. Placenta should be expelled by Crede method when possible, so as to avoid introducing the hand into uterus. When placenta is retained be careful to thoroughly disenfect hand and arm immediately before attempting to remove placenta. Be sure to remove every particle of after birth, as in this way puerperal

septicæmia will develop immediately. Whenever summoned to case of labor after attending a case of sepsis such as erysipelas, puerperal fever, &c., besides using the ordary antiseptic measures you should use the permanganate method. By it the hands, it is claimed, may be rendered practically sterile to culture tests. It is as follows: First, the nails are cut short and carefully cleaned; second, the hands and forearm are scrubbed for three minutes with soap and water. The brush before using is sterilized by steam, and the water, which is as hot as can be borne, is frequently changed. The soap is rinsed off with plain water; third, the hands are next immersed into a warm solution of permanganate of potassium and are scrubbed with a sterilized swab. Boiled water should be used for the solution, which should be saturated; fourth, the hands are next held in a warm saturated solution of oxalic acid in boiled water until permanganate stain is entirely removed; fifth, after rinsing in sterilized water the hands are immersed for two minutes in a 1-500 mencuric chlor. sol. After this method any physician can safely attend labor cases. After delivery if there is a laceratation repair it immediately, using prepared silk, silk worm gut or silver wire, as they are less apt to cause suppuration along the needle tract. Use cat gut for buried sutures. Sutures should be removed on eighth or ninth day. After delivery you must again thoroughly disinfect your hands and arms, remove placenta and disinfect again as before, then have soiled parts of body thoroughly cleaned at once with antiseptic solution; her linen if necessary should be changed and all blood-stained articles removed from bed. Bathe genitals thoroughly with antiseptic solution, using a piece of sterilized gauze or towling. After cleansing the vulva is covered with an antiseptic dressing. They are not employed as occlusion dressing. Their object is rather to promote cleanliness of the external parts, thus limiting the danger of infecting the passage from the proximity of the decomposing discharges. Should catherization be required after labor, care will obviously be needed to prevent infection of the vaginal wounds and abrasions, but this is not all—cystitis frequently results from infectious materials being carried into the bladder during catherization. Pyelitis may result by the extention of the septic process from the vesical mucosa through the ureters. To prevent this the strictest asepsis must therefore be observed in catherterizing the bladder. Instruments should be boiled in water for five minutes immediately before using,and this is possible even with soft rubber catherters without material injury to the instrument. Extreme care must be taken to prevent urine from trickling down over the effected parts. After removing catheter disinfect it immedialy, bathe the external genitals with 1-4000 bichloride mercury sol. (I use the glass catheter altogether. It has the advantage that it presents a perfectly smooth surface and corner, therefore, a minimum amount of urethral irritation. Boiling the instrument for five minutes immediately before using renders it aseptic).

During the lying-in period I always direct the nurse to use the vaginal douche 1-4000, twice daily, also to change vulva dressing every three or four hours, and after removing each dressing bathe the external genitals. All linen must be changed every day.

DISCUSSION.

Dr. Kent.—"I listened with pleasure and interest to the well prepared paper of Dr. McKenzie. I would be rather inclined to criticise Dr. McKenzie adversely, but in truth I find no fault with him, and must say that I heartily approve of everything that Dr. McKenzie has said. I have been practicing midwifery antiseptically I think ever since I have been practising medicine, which is quite a number of years, but I do it, I think, in a much simpler way than Dr. McKenzie advocates, and I say with pride that so far as I know I have never had a case of puerperal septicemia where I delivered the case. In consequence of the success I have had along that line I am going to give in a few plain words my manner of managing the case so as to avoid puerperal septicemia. When I am called in I wash my hands thoroughly in a simple carbolized solution, not very strong, but strong enough as I think, to cleanse my hands well. Then I use carbolized vaseline. I have never taken the trouble Dr. McKenzie advocates of having the patient sponged. That might be necessary in some cases, but I have not found it so, and I am inclined to think from my experience that puerperal septicæmia is not a very common disease, or I might have had some of it in consequence of my not having been more thorough in my treatment. Oftentimes in the rush of human affairs even in a small village, you do not have time to do everything that Dr.McKenzie advocates, and then you must do the best you can. After I have delivered my patient, within a few minutes I deliver the placenta. I ordinarily have her sponged then, the bed linen changed at once, and have her washed once or twice a day with a simple carbolized solution. I instruct usually that these washings should be kept

up from five to eight days, depending upon the length of the discharge or evidence of any septic matter that might be there. Where I have been called to cases of puerperal septicemia I used much the same treatment, and I have been gratified with the quick falling of the temperature and the rapid improvement of the patient after I began the washing. I believe that the best of all is in cleanliness, absolute cleanliness, abundance of fresh air, and as much sunshine as you can conveniently have.

Dr. McMullan.—I am disposed to agree with Dr. Kent in his management of normal labor. My record probably has been as good as the every day practitioner, and I have never yet found it necessary to do more than exercise ordinary cleanliness. I would like to have one point brought out, and that is with reference to the vaginal douches after labor. My custom has been not to use them, and I would like to hear some expression in reference to their use in ordinary normal labor.

Dr. O'Hagan.—I am opposed to vaginal douches, and it has been established without doubt that the discharges themselves are the best antiseptics we have. The difficulty and annoyance of using vaginal douches does harm to the patient in the way of disturbing her, and I think among the most advanced and enlightened obstetricians the method is not approved. I do not think they are of value, and should be condemned.

Dr. Watson.—I cannot agree with Dr. O'Hagan about the harmfulness of vaginal douches. I think the best time to use them is by the vagina in the early stages. I am sure it makes the patient a great deal more comfortable. I have tried both methods, and my patients invariably call for the douches. In regard to the rare occurrence of sepsis following labor, I have not had the same experience Dr. Kent has. I feel it my duty to proceed, as this gentleman in his paper advocated, to deal cautiously with every case. I think we have, most of us, met with cases where there is septic infection and various other things of that kind. In regard to the use of the douche after labor as an antiseptic protection, I do not think that is necessary. I think that vaginal douches and washing off with bichloride solution after delivery will dispense with the use of the douches. I am opposed to post-partem douches unless they are called for especially.

Dr. Royster.—The only point about which Dr. McKenzie has overstepped the bounds is in recommending the use of douches in leucorrhea cases. My practice has been not to use douches in normal labor. I believe Dr. Kent has been very lucky. I am sure if I had omitted any link in the chain of my usual precautions I would have had a case of puerperal fever on my hands. I have no record to speak from, because my experience has been too small, but it seems to me we are called upon to be just as careful in our ordinary midwifery as we are in surgical practice. I think that a man should use a stiff brush and plenty of soap and water, and some chemical preparation afterwards. I think if that is done the rest of the conduct of antisepsis in keeping the hands clean will be very easy. I was much interested in an article by Dr. Edgar some time ago on the practical management of normal labor. He quoted statistics from Williams and others to prove that there were no germs subsisting normaily in the lochia. I have seen a great many articles on the study of practical asepsis for labor, but there are very few which tell the general practitioner what he wants to know in ordinary practice. They talk about sterilized sheets and sterilized gowns and things of that kind, but they do not talk about the sterilized finger. The germs do not exist normally in the vagina. My experience has not been large enough to make any furthur observations, but I think we all learn that most of the trouble comes trom personal contact either from the doctor or the nurse. It is not medicine.

Dr. Herring,—What little we all know about medicine in my opinion we learn by experience. We have learned that a dose of castor oil affects the bowels if we take it. We know that it will act in a uniform manner with but few exceptions. I can only reason from facts. I cannot manufacture theories, neither can I get a theory from anything but a known fact. I wish simply to relate a case. It was the case of a pauper patient who had miscarried at three months. She miscarried two days, the fœtus had discharged promptly as it usually does, and left the balance behind. When I went to see her she had a temperature of 106. She had all the cover in the house piled on her, and she was shivering. I found that the afterbirth was still adhering to the uterus. I told her the necessity for getting it out. I went back to get instruments, and told her to have some hot water, and told her to send for some old woman who would do what I said to do without asking any questions. When I got back the hot water was there and the old woman was there. I put her on a table, put her on her side and tried to detach the placenta. I could not get it with my finger. I never have been able to get one with my finger yet, but I went in with instruments. The

placenta was absolutely in a state of decay. I worked with her for two hours. I got every particle out that I could. I don't know whether I got any microbes or not. I didn't see them. I cleansed her as best I could with hot water. After I got everything I could with the instrument I took a syringe and introduced the nozzle into the uterus, and washed it clean and took hot water and pumped in there. I pumped in about three gallons. I took it out and had her washed outside. I put her back to bed and her temperature was 98½. It never went above that temperature any more,and she never took a drop of medicine. I want to ask this question: If the germs produced all that disturbance in her system, caused a temperature of 106, and she was in a profuse cold—cold to the hand, but hot to the thermometer, I want to ask whether the microbes causing all this disturbance, and which you need a powerful microscope to see, is it possible that I took them out with a pair of dressing forceps? Here was a woman having chill after chill, in profuse perspiration, with pure and unadulterated septicemia, and all I did was to cleanse out her womb with forceps and pump in hot water until I could not get a trace of colored matter. I ask this Society to tell me what caused that temperature and what caused it to go away.

Dr. J. W. Long.—If Dr. Herring had looked for those microbes with a microscope he probably would have found them. I am familiar to some extent with Dr. McKenzie's obstetrical work, and if his method may be dominated meddlesome midwifery then it gives good results, for I know he attains excellent results. I agree with Dr. Royster that the same precautions should be taken in preparing ones hands for an obstetrical case as in surgical practice. If, as most of us believe, these little microbes or bacteria may be destroyed or gotten rid of by the use of mechanical measures and antiseptic drugs, then it seems to me to be rational, to be good common sense treatment and a common sense method to scrape and wash and use antiseptics until we free our hauds and the genitals from bacteria. It has, I think, been clearly shown that the germs have their normal habitat in the upper part of the vagina and even in the urethral canal. None are found beyond the os in a normal healthy uterus. I agree,and my practice is when there is no leucorrhea, there should not be used any vaginal douches before labor. The gist of Dr. McDenzie's paper is that he is striving to attain asepsis and that he is working to free his hands and the genitals from these germs, and I believe that that is the basis of all good surgery, and I believe we ought to observe an obstetrical case as a surgical case, and treat it after the same general principles.

Dr. McBrayer.—In regard to the vaginal douches, I would be willing to use it after every labor grovided I had a trained nurse to administer it, but in the absence of a trained nurse I think it is not only not necessary, but I think it is dangerous to use these common syringes that lay around the house in the dirt and to use the vaginal douch after normal labor. You all down east may be fortunate enough to have a trained nurse with every case of obstetrics, but we up here are not quite so fortunate, and the younger members of our profession are so rushed that they have not the time to administer the douche themselves, so under those circumstances I am opposed to giving the douche. Theory is a nice thing, and I am sorry that all our theories do not prove to be correct. I just want to tell you what a young doctor said to me one day. The old doctor referred to is a member of this Society, and if I called his name you would all revere and honor it. The young doctor happened to practice in the same neighborhood, and he came to me one day and said: "I cannot understand it. Here I go to a case of labor and use all antiseptic precautions, and yet I have a number of cases of septicemia and my patients die, while my friend and colleague never washes his hands. He even goes to the stable and hitches his own horse and goes on and never has had a case of septicemia." I don't know what that proves, but I understand it is true.

President's Address.

Annual Meeting of N. C. Medical Society, Asheville, N. C., May 30--June 2, '99.

Gentlemen of the N. C. Medical Society:

I congratulate you upon this your third meeting in this delightful city of the mountains where there is so much to charm the eye and elevate the mind. In this inspiring clime your faculties will doubtless appear at their very best. Since the abandonment on the part of your presiding officers of the old time custom of delivering an address upon some medical subject, my immediate predecessors in office have adopted a course of discussing questions of passing interest or of importance for the better government of your body. I can see no reason why I should not follow this well beaten track. Much ground has been gone over, and in some instances we have found

*Read before the North Carolina Medical Society at Asheville, N. C.

it expedient to retrace our steps. I hope now that we have reached a position sufficiently high to almost adopt the motto of "Nulla vestigia retrorsum." I heartily congratulate you upon the most distinctive and by far real advancement you have had in many years. It is a complete attainment of the wishes and purposes of your most advanced thinkers for years. Many eloquent pleas have been made for a higher standard of medical education in this State. A number of plans to reach this end have been discussed and proposed by your former presidents. To their constant repetition of, and urging this question we owe its happy solution at least. "The Gordion Knot" has been severed at one stroke by legislative enactment. The passing of the act to require applicants for license to practice medicine in this State to exhibit a diploma from some medical College having clinical facilities, and a minimum curriculum for three full years of study is a wise one, and I feel sure will meet with your unqualified endorsement. Unstinted praise is due to the efforts and wisdom of your committee on medical legislatson, and particularly to its chairman in securing the passage of this law. It was a fortunate circumstance that this society had a strong representation in the Legislature. It is a source of gratification that in recent years every Legislature contains some of your formost members who always guard your interest with watchful care. This law should mark a new era in the history of your progress. From this time forward the records of the Board of Medical Examineers will show a greatly decreased percentage in its rejections and re-examinations. The duties of the Examining Board, instead of being as heretofore trying and burdensome in the extreme, will be light and pleasant. The probability of any applicant for license being rejected as many as five or six times is hardly to be considered. So that all future boards are to be facilitated upon the passage of this measure. All this has been accomplished by the passage of this measure. All this has been accomplished by the sentiment of a united profession. At the first Inter-State conference of the Examining Board held in Washington two years since, Dr. Rauch, President of the Illinois Medical Society, severely criticised the medical law of North Carolina, in that it admitted to examination all classes of applicants without regard for educational qualifications. The lamented and beloved Dr. Thomas S. Wood, joined with me in defence of our law, while we were painfully aware of its defects. To such constant and zealous workers as Dr. Wood do we owe the present comparative efficiency of our medical law, after which in the main other States have been modelled. You have been the pioneer of medical legislation in this country; and if you cherish this spirit of progress, as no doubt you will, you will always maintain a position with the foremost medical societies of this country. From your constant education of the people you have at last secured their moral support, and they are looking to you to-day to devise methods to stay or prevent the march of disease. I can very well remember, and so can many of you, when it was thought by many of the laity that the medical society was only organized to maintain a standard of high charges for services, and expressed great surprise when told that no such thing had ever been discussed in a meeting. Now, whenever there is a medical convention, the newspapers are eagerly read to learn what the doctors are doing to prevent or cure disease. We are often asked after a return from our conventions, after the usual inquiries as to the personel of. the new officers, if anything has been found out to cure cancer or consumption; they read and ask about germs, too.

But a few weeks since a distinguished United States Senator gravely informed me that pneumonia was, beyond controversy, caused by germs, and that turpentine would certainly kill the germs and cure pneumonia. I promptly excused him for suggesting turpentine on the ground of State pride and loyalty to a North Carolina product. This is in strong contrast to the preacher, who a few days after, asked if I believed vaccination would prevent small pox. It is probable that he had been reading the "London Anti-Vaccination Reports."

The utility of the Board of Health is recognized by the people of the State. The recent bi-ennial report is a credit to its officers, and compares favorably with the reports of any other State. No water company can now set itself up in business in any town in this State without proper consultation with, and advice from competent medical authority. It has come to be known that no one can jeopardize the health of another or of a community without let or hindrance. In any sudden outbreak of disease in the country, town or city, the help of our health officers is at once invoked to abate it. An apt illustration of this is furnished by the recent development of small-pox cases in various sections of the State, and if any proofs are needed to show the efficiency of the work of the State Board of Health and its Auxiliary County Boards, they are ample. The people now

look upon these boards of health as matters of necessity, and appeal to their officers for help in the hour of danger. The State Board of health within the last year has held conferences with the people upon interests pertaining to the public health in different towns in the State. These conferences should be encouraged, and held oftener, as they have proven useful object lessons in helping to educate the people to a knowledge of hygienic laws. They have begotten a confidence on the part of the people on all matters pertaining to the laws of health. It has taken many years, patient zeal and work to bring about these relations between the people and the profession. Many of those who worked for years to accomplish this end have gone to their last reward, leaving us to continuously build upon the foundations so wisely laid.

I am rejoiced to say, in your membership, there are young men full of ambition, and thoroughly qualified by reason of professional attainments to carry on this work. Let us encourage the ambitions and hopes of the members, and teach them to know the society will reward their allegiance by bestowing on them their full share of its honors.

Since our last meeting there have been two events which, in their nature, as affecting the interest of this society, demand our attention. I refer to the organization and convention of the Seaboard and Tri-State Medical Societies, the former consisting of a membership of the doctors of the Tide Water Section of Virginia and North Carolina, and the latter of members of the Virginia, North and South Carolina Medical Societies. These matters you will have to consider and decide what your attitude and relations shall be toward these bodies. To a certain extent they are off-shoots from this Society. The question that confronts you mainly is, will they, and in what way, affect your interest and growth. I am fully satisfied that they will seriously injure this Society, and the reasons are plain enough.

They must in a measure, depend upon the profession for their membership and support. This, our Society, is largely made up of country doctors. The average doctor can not pull away from his business more than once in any year to attend a society meeting, even if he could afford the expense. If he belonged to all of these societies, he has a divided interest, and the chances are strong that he would adhere the closer to the society that to the greatest degree furthered his aims or gratified his ambitions.

If there are are to be two or three society meetings during the year in North Carolina, it is but natural that any member of either society, will attend the most convenient. The exigencies of convenience are more often followed than the dictates of loyalty. The members that attend these new organizations will hardly be induced to attend the State Society. The officers of these new bodies will strive to make their meetings successful. Recent converts are almost always the most zealous. I think we will make a grave error, and one not easily remedied, to encourage any organizations that must tend to cause a division of professional interests, and lessen that power for professional advancement which this society has so faithfully and earnestly worked for through long years. A Society formed of material outside of North Carolina can, and will not feel the same pride and interest in professional growth, as one belonging exclusively to the State. This Society has the highest claims upon your loyalty, and cannot afford to further any interests to divide the profession.

Of the making of Medical Societies there is no end. If this thing goes on, Western North Carolina might unite with East Tennessee to form a Trans-Mountain Medical Society, and the middle section of the State might also organize a Central Medical Association. All of these would leave us with a name only. I most earnestly submit that there is ample room in the State Medical Society for the entire profession of the State. It is only to be regretted that there are not officers enough to go around at every meeting.

If any of you have ambitions beyond the State limits, the arms of the A. M. A. are wide open to receive you, and will give you every opportunity to gratify them; and its Journal stands ready to print and disseminate your papers, This seems to me encouragement enough to broaden out medically beyond the State lines, so to speak. So let us enter a solem resolution here to stand by the State Medical Society, and encourage no others in conflict with its interests. The Tri-State has incorporated in its by-laws a provision that membership in one of the State Societies shall be a pre-requisite to membership in that body. It judiciously halts there. If the provision had said that continuous membership it might have been more plausible.

It has been my intention for several years to bring to your attention a matter which I consider more worthy of the most careful consideration. The occasion seems now ripe for it, the membership being sufficiently large to properly maintain it. We are constantly reminded of the fact that doctors are not business-like in their methods.

Their time is taken up with other thoughts than of money getting. They lay up litsle in this world, but immense treasures in heaven, where they may be of service to them in the hereafter, but can surely be of no earthly use to their wives and children who were dependent upon them for food and raiment, and also for their social position in the community. It is no matter of hearsay, but of direct personal knowledge that in many instances in the house of the dead doctor there was not enough ready cash to give him a decent burial, while there was a small fortune in unpaid and non-collectable accounts on his books. This is a sad commentary, and if any plan can be devised by which the families of our dead members can be benefitted, it is a consummation devoutly to be sought for. If I can succeed in pointing out a way I shall feel that my mission has not been in vain. Whatever has been accomplished by other Medical Societies, surely you can do also. I learn from the Polyclinic that the New York physicians Mutual Aid Association was organized thirty years ago. That journal says; "The record of success attained by a movement originating primarily as a philanthropic charity is most remarkable. When first established in 1868 the object was to afford aid to worthy medical men in circumstances of need, and to assist financially the widow, if, as is only too often the case, she should be left destitute. From such a beginning with a membership of less than twenty and an insurance feature rarely exceeding an amount sufficient to afford a decent burial, an association has developed numbering 1,450 physicians, and paying a fixed sum of $1,000 insurance, within a maximum period of five days after death, the cost of such insurance being less than $18 per thousand. This record embodies a suggestive lesson to communities. A thousand dollars in cash is a very desirable heritage, especially in country communities. There is no good reason why every State Society in the Union could not either alone or in conjunction with neighboring States, organize and maintain successfully such an institution.

Almost as long ago as I can remember anything medical, my grand "Old Master," Prof. Gross, whose name I always speak with reverence, was trying to introduce this feature in the Philadelphia Medical Society. The members of the So. Exp. Co., and Brotherhood of Locomotive Engineers, have had this feature in successful operation for years. Why should we not have? I hope you can formulate and adopt a plan to carry out these suggestions.

Last year at our convention there was some discussion as to the propriety of establishing reciprocal relation between the North Carolina and Virginia examining boards. No definite conclusion was reached as to any method to attain this end. For many reasons I have long thought there should be an interchange of licenses between these boards. I now propose a committee of conference between the boards, and let this committee settle upon a modified plan of examination for licentiates of one board applying to the other. North Carolina board has discretionary authority as to the method and scope of examination, and it is probable that the Virginia board is empowered with some latitude.

There are quite a number of our members, who in recent years, by reason of their appointments, have become interested in railway surgery. This branch of surgery seems now as distinctive as any other, and certain journals devote to it a considerable portion of their space. I would suggest for your consideration the creation of a new section to be styled "The Section on Railway Surgery." The chairman of such a section can introduce many matters of interest in surgery as well as in medical jurisprudence. I would also recommend the establishment of a section in Pædiatrics. These matters are in keeping with the trend of medical thought, and I believe deserve your consideration.

I shall trust, gentlemen, to your kind patience to help me perform the duties of your presiding officer.

Asepsis and Antisepsis in Surgery.†

By Dr. Goode Cheatham, Henderson, N. C.

The practice of asepsis and antisepsis is no longer a subject for argument or controversy in the surgical world, Surgery has made such rapid progress since the introduction of the "antiseptic method" of Sir Joseph Lister, that nearly all opposition to asepsis and antisepsis has disappeared. It has become an integral part of the practice of the majority of surgeons all over the world; yet there are a few surgeons of today who will operate without any antiseptic precautions whatever, while others use very little, thereby exposing their patients to infections which may prove fatal. Among some of the advances made in surgery, due te asepsis and antisepsis, may be mentioned the abdominal surgery of to-day. No surgeon would hesitate to open the abdominal cavity now, when only a few years ago it was considered almost certain death. The

†Read before the North Carolina Medical Society at Asheville, N. C.

number of successful abdominal operations in cases of gun-shot wounds of the intestines is proof enough to justify the employment of every antiseptic precaution in all operations and wounds, for without it we are sure to have suppuration and, in many instances, septicæmia.

Reports from the last war show that a very small percentage of wounds of American soldiers proved fatal, which was due to the rigid antiseptic methods employed. Each soldier was provided with an emergency outfit, consisting of a piece of sterile gauze, a handkerchief with illustrations and stamped instructions for bandaging every part of the body. These immediate antiseptic precautions, with the care of the surgeons in the hospitals, gives American surgery a great triumph. Compound fractures have been considered among the most dangerous accidents, but now little more than simple ones, while, in amputations, the mortality rate is almost nothing.

A review of the actual status of the life-saving value of antiseptic method certainly justifies its use under all circumstances. If the only claim that could be made for the antiseptic method was that it made the patient more comfortable, hastened the healing of wounds, or rendered an operation safer, it immediately becomes the imperative duty of every surgeon to adopt it.

Since the advent of Lister's method with its elaborately prepared dressings, its powerful germicides, and its troublesome apparatus, there has been slow, but sure tendency to simplify these methods. Simplicity, cleanliness and the weaker antiseptic solutions have gained predominence over the above method. The use of powerful germicides upon a wound surface is falling into disuse, and rightly so, for it has been proven that a wound subjected to this undue irritation does not heal as promptly, for this solution destroys the resistance and antiseptic action of the living cells, which will, if not interfered with, render the few germs inactive, which may gain entrance during an operation conducted in accordance with the improved methods of modern surgery. It will also cause undue serous exudation. There is also some danger of poisoning from the use of strong solutions of bi-chloride and carbolic acid, and also from the use of iodoform, but these cases are very rare, in fact too rare to deserve mention. The simple methods of sterilization, which give better results, are due to the practical teachings given us by the abdominal surgeons. Now the surgeon uses, after his first incision, weak bi-chloride solutions, simple boiled water, or boiled normal salt solutions, reserving his strong antiseptic solutions for cleansing sponges, tampons, etc.

Infection from the germs, which enter wounds through the medium of air, is rare, but that it may occur by this means is not in the least impossible. The most important steps to be taken to prevent infection are the careful preparation of the patient, the rendering aseptic the hands of the operator and assistants, and also the thorough sterilization of instruments, sponges, ligatures and dressings. The most approved methods of asepsis and antisepsis of to-day should be familiar to every surgeon. These methods can be found discussed in detail in any standard work on surgery.

Recently, for disinfection of instruments and dressings, formaldehyde gas has become very popular with some of the profession.

The following are some of the experiments with formaldehyde gas, as a means of disinfecting instruments and dressings. The apparatus used contains about six cubic feet. Using four pastilles of paraform, it was possible to render the piece of gauze that had been dipped in a pure culture of anthrax, sterile in ten minutes, but if a piece of gauze was wrapped in seven or eight layers of gauze and this bundle enveloped in three thicknesses of foolscap paper, twenty minutes were required for sterilization. The only disadvantage noted was that on opening the box the escaping gas caused considerable irritation of the eyes of those in the room. With regard to the effect on instruments, it was found that neither the gas nor the liquid formaline had any influence whatever upon the sharpness of the instruments. For the disinfection of small instruments, such as those used by ophthalmologists, otologists, laryngologists and dentists, it is by far the most convenient and speedy method. This method, probably better than any other for the work designed, carries out the principles of disinfection laid down by Koch, viz.: "the absolutely certain destruction of all pathogenic organisms, in the shortest possible time, at the least expense and with a minimum injury to the object of disinfection." For practical purposes ten or fifteen minutes is a short enough time for the sterilization of instruments, and this can be done with five or three grains of paraform.

Chronic Gastro-Intestestinal Catarrh.†

By Dr. Wm. J. McAnally, High Point, N. C.

Chronic Gastro-Intestinal Catarrh is by no means an infrequent disease, I realize its

†Read before the North Carolina Medical Society, Asheville, N. C.

importance and am conscious of my inability to do justice to such a broad subject in this paper. But if I shall succeed in drawing out discussion then my labor is not in vain. These old dyspeptics of whom I shall speak have suffered a great deal and have been despondent and cross a long time. To relieve them is to win their lasting friendship and make perhaps more than one soul happy. This trouble may arise from a variety of causes,eating too much and too fast, use of too many cold drinks, poor and improperly cooked food, and of course various troubles in other parts of the body, as Cancer, Cirrhosis of the liver, Brights' Disease, etc. But of these later cases I shall not speak, my remarks shall be confined to those cases in which the cause may be removed. During the three years I have been practising many interesting cases of Chronic Gastro-Intestinal Catarrh have come under my care. In the diagnosis and treatment of these cases no Ewald or other test meals have been given and no chemical or microscopical examination of the Stools or Stomach Contents were made, because I did not have the necessary apparatus. But I arrived at my conclusions as to the cause and kind of trouble in these patients by observing their habits, food they eat, what agreed with them best, when they were in more distress, whether the pain was continuous or not,the presence or absence of hunger, etc. What I have to say can perhaps be made more plain by citing cases. Miss J. B., a lady sixty, who had for a number of years been troubled with her stomach and bowels had, when I first saw her, been confined to her room for four months and could scarcely take any food without intense suffering and a little over her starvation diet would cause so much pain and burning in stomach and bowels begining about one-half hour after eating, that she was compelled to take morphine.

All this time her bowels were moving from four to eight times a day, and containing much mucos, often streaked with blood. She was thirsty and would occasionally have some fever. Tongue was large and flabby, red at edges and white in the middle, all kinds of food, even water, would ferment and cause pain. Diagnosis, an anacidity. Caused by poor and improperly cooked food and the use of whiskey and tobacco. I believe it was anacidity because she never got hungry, and lean meats hurt her just as bad as the farinaceous food and the fermentation and pain began too soon after eating to be hyperacidity, and there was the morning vomiting of mucus. I did not think it was cancer or ulcer because the pain was not constant and did not begin immediately after taking food as is the case in cancer or ulcer but some twenty or thirty minutes thereafter.

Treatment—Gave an ounce of epsom salts to start with, stopped all food except Valentines meat juice, milk and lime water every two hours. and a cup of hot water every morning, ordered a capsule of bis-subnit 12 grs., and silver nitrate one quarter grain, to be taken t. i. d. one hour after food and every night a capsule containing five grains sulpho carbolate of zinc and opii one-half grain. kept up this treatment for one week and she got along very well and began to be hvngry. Then put her on fifteen drops HCl and ten drops tr. nux. vom. in water three times a day before eating, and allowed eggs and lean meats and light bread with the milk, discontinued the Valentines meat juice, kept up the bismuth and silver twice a day two hours after meals. In about two weeks all the mucus had disappeared from the stools and her bowels moved regular twice a day, she could manage her food without distress, was gaining weight and has been getting along nicely ever since, but has had to continue the HCl. This long continued use of the acid has brought no evil results.

She is doing her house work and eats most anything, feels better, looks well and weighs more than she has in five years. I attribute these results to silver nitrate and HCl.

Have never gotten good from pepsin in these cases, and begin to believe like Prof. Hemmeter, of Johns Hopkins, that pepsin has absolutely no place in the treatment of these cases. He says it is a very rare thing to find pepsinogen absent from the gastric juice. But there will be no pepsin from the pepsinogen if HCl is absent. All this is needed to get the necessary amount of pepsin is to supply the HCl. Really I have very little use for the commercial pepsin at all, except when it is desired to digest food outside of the stomach. If HCl is absent there will be hardly any digestion done in the stomach. Meats cannot be digested at all. A short while after food is taken fermentation will begin in the stomach and even the starches which need no pepsin or acid for their digestion will be ruined and rendered useless. The organic acids formed by this fermentation will irritate the mucous membrane of the stomach and bowels and produce an unhealthy condition of the entire alimentary canal.

For this condition of affairs we can readily see the necessity of sweeping out the alimentary canal, (and nature has been trying to do this for the diarrhœa which we find

present,) and then give antiseptics to prevent fermentation, and silver nitrate to produce a reaction and bring about a healthy condition of the mucous membrane.

Supply the acid and give strychnine to help the motor power of the stomach and the patient will improve right along. The vomiting in the case just mentioned was only once or twice a week, had it been worse I should have used lavage. Anacidity is a disease which may last for years, even a life time, and in different patients we see every degree of severity, it is more often met with and causes a great deal more trouble than hyperacidity, but some distressing cases of the latter are seen. B. D., male, aged 42, came under my care in January, 1898. Had for four years been suffering with hyperacidity, he was nearly always hungry, and the hunger was accompanied by burning and an annoying sensation in the stomach, which was relieved by taking food or water, but would begin again in about an hour after eating, and would be worse than when the stomach was empty. He had been compelled to take bicarbonate of soda to stop this pyrosis. Lean meats, eggs, and other proteids would prevent the burning being so severe, and a big meal of lean roast beef (and by the way he could eat the most of any man I ever saw) would entirely stop the burning for five or six hours, but an ordinary amount would not stop it entirely very long, though he never suffered so very much when he got a reasonable amount at each meal and took his soda. But when he ate a lot of potatoes and beans and only a little meat, and took no soda after eating, the burning would be so intense that he could hardly stand it, and the motor power of his stomach would get so strong from the stimulus the extra amout of acid furnished that the food would be regurgitated. and nearly the entire meal would be spit up within an hour and a half. I gave him calcined magnesia, twenty grains after each meal, advised him to eat largely of lean meats and eggs, and to increase the magnesia when eating vegetables. Magnesia is much better than soda in these cases, as there is no gas formed by the action of the gastric juice upon it. He has been getting along beautifully, and has had do diarrhœa and no tenderness over his bowels. The meat uses up the acid while it is being digested, and Prof. Memmeter says this kind of treatment will, after a while, stop the formation of so much acid in the stomach, and he has fully demonstrated the fallacy of the old theory that an alkali in the stomach will increase the amount of acid secreted. Thus we may have many a dyspeptic, and even the old alcoholic stomach may be repaired and made to do good service again, but where there has been much destruction of mucous membrane that the patient's digestion, like the one legged man's walk, will never be perfect again, but let us give him his crutch.

Report of a Case of Tumor of the Brain Symtomatically Relieved by an Exploratory Operation Upon the Skull.‡

By William Broaddus Pritchard, M. D., and Jno. A. Wyeth, M. D., of New York.

Tumors of the brain constitute a comparatively small but exceedingly interesting and important group among the diseases to which human flesh is heir. Within the past ten years, a period devoted chiefly to the observation and study of affections of the nervous system and the mind, I have personally seen only 15 cases in which a diagnosis was tenable with any certainty, and it is quite possible that autopsy would have failed to confirm such diagnosis in appreciable percentage of this total. In eight of the cases, however, in which either of the autopsy or operation afforded opportunity for confirmation the tumor was found. The interest attaching to the subject, while entrancing, is, unfortunately rather pedagogic than practical. I do not believe that this is necessarily so, however, and one object and the chief one, in presenting the subject to your attention is that of aiding in establishing the converse of this proposition. There is no single problem in clinical neurology so protean in its symptomatic aspects, so fascinating in its attractiveness, so uncertain in developmental possibilities, and finally so gratifying to the student enthusiast in its irrefutable demonstration, as that of tumor within the cranial cavity and of the cerebral structures. The full and intelligent study of this condition involves a masterly grasp of the entire subject of cerebral anatomy, physiology and localization, as well as thorough familiarity with the recorded facts of epirical experience. Even this degree of knowledge is insufficient in the absence of common sense since the importance of the personal equation of the patient in intelligence, education, environment and heredity enters largely as a factor in diagnosis. The importance of the subject scarcely need emphasis. Tumors of the brain are essentially fatal. The vis medicatrix naturæ, that most potent ally of the physician in ordinary disease is as helpless here as impo-

‡Read before the North Carolina Medical Society, Asheville, N: C., May 31st. 1899.

tence itself. The fate of the victim of tumor of the brain, if nature alone be depended upon, is no less deperate than that embodied in the inscription which marked the portals of Dante's Inferno, "Leave hope behind all ye who enter here." The utmost attainments of medical art are almost equally futile. I have yet to learn of an authentic case of spontaneous or medically induced recovery from intracranial tumor, except possibly cysts. Gumma I exclude. The stimulus to effort which is embodied in this statement is, or at least should be, all powerful. To cope with disease successfully, with the assistance of nature, represents a degree of usefulness which should not be despised. To cope successfully with disease unaided, is self-evidently the greater accomplishment and represents the highest possibilities of the art. The ultimate and ideal aim of medicine is mastery of disease regardless of coadjutant factors. For the present he is a fool who disregards any source of help. To aid in saving life is worthy, to save life should be the very acme of our effort. I shall not burden you with a resume of the abstract clinical facts of brain tumor. To cover the subject adequately would necessitate a paper far beyond the time limit permitted by the occasion. The subject is exhaustively considered in many standard text books, and monographs, and is probably familiar to my audience. Many if not most of the clinical facts correllated to the subject are illustrated in the case to which I desire to call your attention. I beg your indulgence in advance for a case history which almost necessarily may appear prolix.

The patient P. L. B. was first seen by me November 20th, 1897, and his home in Asheville, N. C., in consultation with my friend, Dr. H. B. Weaver. The object of the consultation was to determine the nature of an epilepsy from which the patient suffered. The following history was obtained: P. L. B., male, aged 30, married, merchant by occupation, family history negative, personal history free from any record of serious illness or injury up to 1882. During the spring of 1882 patient was suddenly attacked with a fulminant and severe form of cerebro-spinal meningitis. His occupation at that time was that of a farmer in a mountainous region of Western North Carolina, a locality subject to recurring epidemics of cerebro-spinal meningitis. His attack was of some five or six weeks duration, recovery being apparently complete, the disease leaving no nervous sequelæ. Six months later the patient suffered from his first (so far as known) epileptic attack, which occurred at night, without warning or assignable exciting cause. This convulsion was general in distribution and of comparatively severe type, the tongue being bitten. Subsequently other attack followed, always at night (two diurnal attacks only in seven years), always general, always without aura. His condition remained practically the same up to 1889, except that the average number of seizures increased from two or three to five or six a month, the paroxysms preserving the same characteristics. In 1889 he moved his residence to Asheville and changed his occupation from farmer to merchant. For three years subsequently and without other assignable cause than that of change of residence and occupation, he remained absolutely free from these attacks, his health being, to quote his own language, "perfect." In 1892, without any known cause, the epilepsy recurred, but in an entirely different form. While an occasional noctural attack would occur, the majority of the seizures were diurnal. Instead of being general and severe as formerly the attacks were lighter and often unilateral and occasionally without loss of consciousness. Very many of these later attacks were preceded by an aura consisting of a strange and indescribable sensation in the left side (leg and arm) and with an initial motor spasm or signal symptom in the left foot. In exceptional instances this signal symptom was limited to a tonic rigidity of the toes, chiefly the great toe. Quite often the entire seizure would consist of the sudden aura described, with a succeeding tonic rigidity of the foot muscles. More frequently the spasm would extend quickly up the leg, thence to the arm of the same side, next to the left face, ending in unconsciousness and sometimes generalized tonic and clonic movements of the muscles of the entire body. Usually the interval between the aura and the spasm permitted sufficient preparation to prevent injury from a fall. Occasionally the upward extension of the spasm, beginning in the foot, could be prevented by pressing the foot against some object or by grasping in constriction the thigh of the same side. These paroxysms varied considerably in frequency. Eight or ten or even more might occur in a day. On the other hand, he would sometimes remain for several days perhaps free from attacks. During the interval he suffered greatly from severe headaches associated with vertigo and occasional though infrequent sudden vomiting. The headaches at times were said to have been agonizing. Minor occasional changes in temperament and emotional stability were noted, but intellectual processes proper are said to

have remained unimpaired. During the summer of 1897 the patient noticed a gradually developing weakness of the left leg and arm which slowly but steadily increased. At about the same time he began to notice peculiar disturbances of vision. He would suddenly become blind. "I would have to stand still for a few minutes when my sight would just as suddenly return," to quote the patient. An extreme polydipsia developed, as much as two gallons of water being often consumed in a day. There was of course a corresponding polyuria. There were no other subjective symptoms except numerous inconstant and very variable paresthesia of the left side.

Physical Examination.—The patient appeared a well-developed and fairly nourished man of about the age given. Mentally I observed no variation from the normal. Memory, reason and judgment seemed unimpaired. The mental reflexes were quite normally active. I observed no emotional instability whatever. Motor and sensory speech were normal. Taking the cranial nerves in numerical order, the sense of smell was not affected. In testing vision I found a fair perception of light with a bare perception of form. Opthalmos copically the fundi showed well advanced double optic neuritis. The opthalmoscopic findings were established by Dr. ——— of Asheville, and later by Dr. Marple of New York. The extrinsic muscles of the eye (3d, 4th and 6th) were normal and the eye was moved freely in all directions. There was no sensory impairment in the area supplied by the fifth. Innervation of the facial muscles was about equal on the two sides and there was no asymmetry. The auditory nerve was intact on both sides. There was no impairment of taste. The vagus was not affected. The tongue was projected without deviation. Examination of the upper extremities showed decided ataxia of the left arm and hand. Forced flexion and extension of the muscles of the arm and forearm showed distinct weakness of the left as compared with the right. Left hand grasp by dynamometer, 28; Rt. 70, No atrophy. Slight tremor of *right* hand and arm on extension. Tact, pain and temperature sense, normal and equal on the two sides. Muscular sense impaired on the left by comparison with the right. Wrist and triceps reflexes exaggerated on the left. Lower extremities: gait hemiplegia with drag of left foot. No contractures, but slight spasticity of left leg. Flexors and extensors of left leg, ankle and thigh distinctly weaker than right. No Romberg present, but was unable to stand on left leg alone. Left knee jerk quite actively exaggerated and clonus present on left side. No atrophy. No sensory impairment was demonstrated at this time. The tests employed were, however, not at all elaborate or delicate in detail. There were no rectal or vesical symptoms. A summary of the facts related, obtained from the history and a personal examination, led promptly to the diagnosis of brain tumor, the symptoms constituting an almost classical group. It seemed equally legitimate, basing the conclusion upon the nearly always constant aura of paresthesia of the left leg and arm, and of a signal symptom or initial motor spasm affecting the left foot and leg, to assume that the tumor was located in the upper third of the Rolandic region of the right side. The frequent occurrence of spasms limited to the foot alone and sometimes to the toes pointed to the post central rather than the præ-Rolandic area. The sensory aura and the disturbance of muscular sense in the upper extremity together with the apparent non-involvement of mentality, at least in its higher spheres, seemed consistent with and indeed confirmatory of this view. The absence of family or personal tuberculosis or syphilis and of cancerous tendencies together with the empirically known fact that gliomatous growths are next perbaps in frequency, served as a basis for a presumptive diagnosis, from the pathological standpoint, of glioma or gliosarcoma. The etiological relationship of the preceding cerebro spinal meningitis offered many conjectural possibilities, but nothing positive and little if any precedent. The prognosis was necessarily pessimistic and in extreme degree, with one modifying possibility, and one alone. Assuming the diagnosis to be correct, the one chance for life lay in the direction of surgical interferrence. Following a time-honored precedent, the value of which I have confirmed through personal experience, I advised that the patient be put upon steadily and rapidly increasing doses of potassium iodide. If after reaching a daily dose of 300 grains, attainable in a month or six weeks by gradual increase, no improvement should result, I advised that the patient be sent on to New York, placed in the Polyclinic Hospital, there to be watched by trained attendants under my supervision, and if the symptoms observed confirmed the diagnosis already made, then open the brain and, if possible, remove the tumor. Should death occur from operation it would be only an anticipation by a few weeks or months of a fate which was inevitable, and the patient would have the benefit of a legitimate euthanasia. My advice was followed to the letter. The iodides

proving useless the patient came to New York accompanied by Dr. Weaver and was admitted to the Polyclinic Hospital. Within less than a week the history as already given was confirmed. The symptoms had meantime progressed markedly. The patient was totally blind. Beginning atrophy had succeeded the neuritis. He was completely helpless, the hemiplegia having become almost absolute. The spasms had increased, as many as twenty or more occurring sometimes daily. The headache was excruciating and continuous. Insomnia added its agonies to the picture. The patient begged for death and expressed himself as more than willing to take any risks involved in surgical interference. Preliminary to the operation I made a further and more elaborate and exact examination of the patient. In addition to the demonstration of the symptoms already mentioned, which differed from former observations only in degree, I noted the following exceedingly interesting sensory and other phenomena. In the lower extremity (the leg) there was present decided defect of tactile sense. He was unable to distinguish cotton or cloth from wood or the touch of the finger. When touched at more than one point he was totally unable to determine the number of points of contact. A peculiar ataxia or allochiria of tactile perception was manifest. When touched on the left leg he would say it was the right. When touched on the left foot he would refer the tactile impression to the knee or thigh perhaps. This was true also of pain sense. He was unable to differentiate differences in the degree of pressure or weight upon the leg and was totally unable to duplicate accurately with the right leg or foot the various positions into which I put the left leg. At this time a very marked and aggravated degree of tremor was noticed on the sound side (the right) on any muscular effort involving extension of leg or arm. The scalp having been shaved several observations were made as to differences in surface temperature upon the two sides of the skull. The results were not entirely negative, but they did not admit of any positive conclusions. A distinct and constant difference was, however, plainly evident in the percussion note over the the parietal region of the two sides, decided and constant increase of dullness being noted over the right as compared with the left. This difference was demonstrated upon several occasions and was invariably present. These symptoms were construed as confirming the localizing diagnosis placing the tumor at or beneath the post-Rolandic or post-central convolution on the right side in its posterior and lower segments adjacent to and probably involving (from the sensory symptoms) the supra-marginal and angular gyri. I hesitated in an opinion as to a cortical or subcortical localization for obvious reasons, but leaned rather to the subcortical in view of the fact that purely mental processes were absolutely intact. That the cortex was *involved* I felt no doubt, and I also believed that the tumor was accessible surgically and probably removable. On January 20th Dr. Wyeth operated.

REPORT OF THE OPERATION.

On the 20th of January, 1898, at the New York Polyclinic Medical School and Hospital, the following operation was performed on Mr. P., of Asheville, N. C.

A diagnosis of a tumor near the right fissure of Rolando at the lower border of the upper third posteriorly, had been made by Dr. Pritchard who had carefully studied the case from the standpoint of a neurologist. A large horseshoe-shaped incision was made through the scalp down to the cranium. The convexity of this incision was near the median line of the skull and extended toward the temporo-purietal suture about four inches, there being about three inches between the sides of the incision. The bone was exposed by separating the scalp on either side of the line of incision for about a quarter of an inch, leaving it as closely adherent to the bony flap to be elevated as was possible. With a small sharp chisel the bone was now furrowed, and with the aid of the DeVilbiss rougeur, the bone was entirely cut through in line with the primary incision. The completion of the operation was postponed, as is my custom, to the following day. The following day this flap of bone was fractured across the point between the ends of the incision, and with the adherent scalp was turned down over the patient's ear. The dura mater was incised in the same line as the original flap and this was also turned down and the brain exposed. By careful exploration with the dull end of a long Hagedorn needle, the tumor could be distinctly felt, measuring more than two inches transversely and so deep-seated and so far from the surface that its removal was deemed unjustifiable. It was found impossible to stitch the dural flap in position as the brain bulged through the opening and as this membrane had been worn to extreme thinness by the long continued pressure of the brain the sutures did not hold. The trap-door of bone and adhering scalp was restored about to its original position, leaving one-half inch of room for relief of pressure.

The patient did well after the operation

despite the development of a *fungus cerebri*.

Several interesting problems present themselves in connection with this case. I shall confine myself, less I trespass too far upon a tolerance taxed I fear already to the limits of courteous endurance, to two aspects aloue. To what extent is surgical interference indicated or permissible in tumor of the brain? What is the explanation of the symptomatic relief obtained in this case, in which the tumor was not removed? The two problems are correllated to such a degree as will permit of their joint consideration. The facts of experience, personal and impersonal, justify, I believe, he acceptance of the following propositions: Tumor of the brain, per se, is essentially fatal regardless of pathological type or location. Possible and rare exceptions are tubercular and cystic neoplasms. Syphilitic gummata should not be considered a variety of brain tumor. Surgical interference is the only hope, and is not only indiceted but imperatively demanded. In a small proportion of cases, depending upon location and pathological type, surgical procedure may prove curative. Ferrier states this proportion as 13 per cent., which seems rather optimistic. In mauy casys, Ferrier says, more than 50 per cent. surgical interference offers the probability—indeed a reasonable certainty —of symptomatic relief and prolongation of life. Results here also vary in degree, though less so, with the factors of pathogenesis and locality. In all cases, regardless of pathological variety, localization or multiplicity of lesions, osteoplastic operations upon the skull are not only permissible but indicated since they offer the only hope and under proper precautions and technique exploratory entrance of the skull involves but little danger to life per se. Such operations should, by the way, be always primarily exploratory.

With regard to the second problem theories rather than facts, must necessarily enter into the answer. In the case presented the tumor was not removed and yet the patient (who I feel confident would have been dead long ago but for the operation) is not only alive, but is, and has been, free from headaches, epilepsy and all other irritative symptoms for more than a year, has recovered his general health and strength and is able to make a living. To what does he owe his improvement?

The results in this case are not unique, many similar instances having been recorded, notably several which were reported at the meeting of the British Medical Association in Edinburgh just a year ago by Horsley, Waterhouse and others, and by Kramer, of Cincinatti. Irritative symptoms may be and often are due in intracranial tumor to increased intracranial pressure. The relief of such pressure by opening up the skull suggests an explanation. Gray case Stanford (3 mos.) I cannot believe however, that such relief would be either permanent or prolonged. Our patient, eighteen months after the operation, is still free from irritative symptoms.

Another theory suggests itself: The operative field, it will be remembered, was subsequently filled with an enormous hernia cerebri, The major part of this hernia eventually sloughed off, aided by a ligature. Why is it not possible, and indeed proable, that the tumor, following the law of all neoplasms, which is growth in the direction of least resistance, should have grown out of the cranial cavity with the hernia and been sloughed off with it? I believe this theory to be additionally probable if, as assumed, the growth was gliomatous. There is some precedent in support of this theory. My friend, Dr. Weiner, of New York, in his report of a somewhat similar case, with enormous hernia cerebra following the operation, found on microscopical examination of the hernia tissue that it was chiefly composed of cancerous tumor elements. Still another theory has been advanced to the effect that surgical trauma is sometimes pathologically alterative, so to speak, as for example in the effects from scarifying ulcers. This last hypothesis seems to me to be least entitled to credence and I do not offer it with any personal endorsement whatever.

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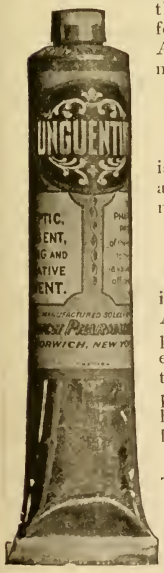

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MEETING OF THE STATE MEDICAL SOCIETY IN ASHEVILLE.

The 46th annual meeting of the Medical Society of the State of North Carolina, was held in Asheville May 30th to June 1st. The local committee of arrangements with Dr. M. H. Fletcher at its head, deserves much praise for the admirable manner in which they provided for the varied wants and necessities of the society. The hospitality of the people of Asheville had neither rule nor measure, but was given with the most liberal hand, not only to the Society as a whole but each individual member felt a personal interest in the welcome and an appointed place in the entertainments. The reception at Dr. Burroughs, the drive over the Biltmore estate, the lunch at the Oakland Heights Sanitarium, the smoker at Dr. Minor's, the elegant supper at Dr. Van Bergen, the banquet at the Battery Park Hotel, will linger in the heart for many, many days to come like a pleasant dream to be often recalled to mind. To the younger members the german, on the evening of the second day, was by no means the least among the many things provided by the Asheville people. The scientific part of the program was overshadowed by the full handed welcome, and some would complain that not much real work was done. But is it not real work to make the overburdened heart forget its worry, to deepen and broaden the fraternal spirit which is in us all, to draw men close together in their daily tasks, to make them feel their common lot, their common end, that each is brother to the other in their joy and pleasure?

There is hardly greater work than this, and this work was done in Asheville. We claim in addition to all this that the papers were excellent denoting care and study in their preparation. The discussion might have been more full and general.

The place of meeting, being in the Headquarters Hotel, was a great convenience, especially to the officers and committeemen. The attendance was large and the man who did not enjoy himself thoroughly must have had some catarrhal affection of his bile-ducts. The delightful weather and the ever present charm of mountain scenery gave no rest to pleasure and delight. We would say something of the daughters of these people but language fails and words fall short of their meaning.

MINUTES OF THE FORTY-SIXTH ANNUAL MEETING OF THE MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA.

First day—Tuesday Morning.

The 46th annual meeting of the Medical Society of the State of North Carolina was convened in the ball room of the Battery Park Hotel, Asheville, N. C., President L. J. Picot in the chair.

The Society was called to order by Dr. M. H. Fletcher, of Asheville, Chairman of the Local Committee of Arrangements.

The session was opened with prayer by Rev. C. W. Byrd, D. D., of the Central Methodist Church.

Hon. Locke Craige then delivered the following address of welcome:

Mr. Chairman, Gentlemen of the Medical Society, Ladies and Gentlemen:

When I was asked to deliver this address of welcome, Dr. McBrayer presented it to me in this way: Did I think that I was afraid to stand before four hundred doctors, and if I had felt then as I feel now I would have said yes, and would not have been here.

The most cordial hospitality that I ever received was in a little pine cabin home. It nestled away up under overhanging cliffs, beneath the shadows of the towers and the domes of the Black mountains. The address of welcome was in these words: "We are poor, but we are friendly." There was indeed a dearth of luxury, but there was a great abundance of good will, more refreshing even than the sparkling waters of the stream that poured down fresh from the granite of the eternal hills. It is in this same spirit of free, cordial, simple mountain city hospitality that I, in the name of the people of our mountain city, greet the medical fraternity of North Carolina, and tell you that the gates of this city are wide open to you, that the city is yours, and the fullness thereof. The doctor is always welcome—that is, in the hour of necessity. We

never believe in doctors until we need one, and when wo need one we are like the man in Texas who wanted a pistol, we need him bad, and we want him now. When the strong arm that is the stay and protection of the family is stricken down by affliction in the dark hours, "when the dying night lamp flickers, and the shadows rise and fall," we welcome the one who can give a ray of hope that this will not be the light of the stern last morning. When the mother with streaming hair leans over the dying infant whose parched, cracked lips only her tears now moisten, she welcomes the one who can stop the pain of the last death cry of the little one in the night.

Some one has said that the physician who first discovered the efficacy of anæsthetics conferred a greater service on humanity than all the authors and teachers of moral dogmas. This is, doubtless, an extravagant statement, but it is but just to say that there is no calling, no profession, nobler, higher, grander, with a more divine mission than that which has for its ultimate purpose the mastery of the science of the human body, and the conquest of diseases and sufferings of our kind. While Alexander the Great was conquering the world, while Cæsar pushing out the borders of the Republic and crushing his enemies with his legions, while Napoleon was terrifying Europe with a conflagration of falling cities and the tramp of embattled hosts, Hippocrates and Galena, and Jenner and Harvey, and their fellows, unnoticed, unknown, in the obscure laboratory, sometimes in the prison of persecution, were battling, with courage and a faith that never faltered, against the great enemy of mankind, and doing a work that will always bless all the children of all generations. There is one thing about the doctor, too—he never makes any mistakes, for dead men tell no tales. But there is this consolation, that the doctor can learn in the school of experience. Mind you, I do not say it is the only school in which he can learn, but he does learn in the school of experience. They can truthfully say with the poet:

We hold it truth, with him who sings
To one clear harp in divers tones,
That we may rise on stepping stones,
Of our dead *patients* to higher things.

I have read that it is the contention of some who have studied the records written upon the rocks that there are evidences on this planet of a race of men who have been exterminated by an incurable disease, and we know that the smallpox would have devastated Europe had it not been for the discovery of Dr. Jenner. There is now presented to the medical profession a problem, and its solution is demanded. There is a little germ, they tell me, and I believe that you call him bacillus tuberculosis. He is more invincible than an army with banners, he is the greatest enemy that the human family has encountered. He destroys not in the fierce, fiery conflict, he grapples not his victim in the fiery agonies of death, but slowly he parades him before the eyes of loved ones, and with a cruelty as relentless as the gates of hell knaws away his vitals. Your profession, with all its learning and ability. stands helpless in his presence, powerless as the poor deluded priest who walks out in front of the naked army of Filipinos and implores his god to bring consternation on the ranks of the monsters who are killing his people with fire and leaden hail. It is the great enemy of human kind, it is the great problem for solution of modern medicine, and I believe that the man now lives, an intellectual Hercules. who shall destroy this myriad-headed hydra, who will rescue and bless our race. His name will eclipse that of Harvey and Jenner.

However this may be, again I say, in the name of all the people of Asheville, both laymen and belonging to the profession, I hope your deliberarions may be pleasant and profitable, that your Society may continue, as it always has been, learned and progressive, the pride of our people and an ornament to our State.

RESPONSE TO ADDRESS OF WELCOME.

Dr. Benj. K. Hays, of Oxford, made the following response on behalf of the Society:

To me, Mr. President, has been assigned the pleasing but extremely difficult task of making suitable acknowledgment of this most cordial reception. Fortunately it is not expected of an unknown country doctor to echo in strains harmonious the eloquence of a lawyer and statesman whose name is a household word throughout North Carolina.

Had it been my duty to prepare an address for this occasion and had the speaker to whom we have just listened with so much pleasure, been unexpectedly called upon to make reply, even then the results would have been most unequal. But, sir, when it is required of me to make an immediate reply to so finished an oration and to express the gratitude of this body for such words of welcome, I feel myself wholly unequal to the task. And yet, Mr. President, this body of physicians deems it a peculiar privilege to meet in this city, and while its many attractions are known

throughout the civilized world, I wish to say that its beautiful scenery, and pure air, and magnificent hotels are less to us than the reception which has been accorded us here to-day.

I shall not undertake to enumerate the charms of Asheville; they are in evidence and speak for themselves, and we must read the history of a dozen nations to learn of the blessings enjoyed here by the inhabitants of a single town. The Athenians were a people of culture, but could not resist the armies of Philip, nor the Romans. The Roman soldier conquered the world, but could not expel from his city the dread malaria that came with each returning summer claiming its victims by thousands. The arid regions of Africa were free from malaria, but who would build his home in a desert? The mountains of Switzerland were truly beautiful, but the Government of that country was unsettled, and the mountains infested with robbers.

But here, Mr. President, we find all the beauties of Switzerland; we find a climate more healthful than the arid regions of Africa, a soil more fertile than the banks of the Nile. We find a people whose culture is equal to that of the Athenians. We find the largest library in the State, and schools which are equal to the best. On every side is manifest a love for the beautiful and for the artistic. The most casual observer finds evidence that this people is not disturbed by intestinal discord, for yonder magnificent temples dedicated to the worship of Him who hung on Calvary are monuments of perpetual peace. Nor is there fear of a foreign foe, for it is known to all that the life and liberty and property of the humblest citizen are protebted by a strong right arm, before which the combined hosts of all the Cæsras would be as chaff before a mighty wind.

Here, too, Mr. President, in our own profession are men whose ability is recognized in two continents. When the future historian of medicine shall tell how that dread disease, tuberculosis, was blotted from the face of the earth, it will be found that the labor and investigations of men now seated within the sound of my voice played no small part in that Herculean undertaking. But, sir, the most crucial test that can be applied to a people is the position occupied by its womanhood. By savage people woman is treated as a slave; a little higher in the social scale she is still a servant; among people of civilization she is regarded as man's equal, while here in Asheville she reigns a queen.

Would you know the fairest woman
That has lived within the North State?
Go you then unto the mountains,
View the lovely Belle of Asheville,
In her form and in her figure,
Standing like a Grecian statue—
In her brow of speaking grandeur,
In her eye of liquid azure;
In her lips of rose and ruby,
In her neck and arms majestic,
In her rich and fair complexion
She combines as many graces,
She combines as much of beauty
As to any earthly creature.
By the Gods was ever granted.
In his heart of heart blind Homer
Never pictured fairer woman,
In his sweetest strain did Horace
Ne'er ascribe to Roman beauty
More that forms a perfect beauty,
More that forms a majestic beauty.
More that forms a perfect woman.

Such, Mr. President, is the Queen city of North Carolina as she is to-day, arrayed in her robes of verdue, the mountains forming her chair of State, while the French Broad plays laughingly about her feet. Had the little strip of land on which Asheville is located been cut from North Carolina one hundred years ago, it would have been counted no great loss; and yet, sir, this strip of land has produced some half dozen men, each of whom has been instrumental in shaping laws, the institutions, the character, the destiny of the State.

Need I tell of David L. Swain, who left the Governor's chair to become President of the University and who, laboring in that capacity for the third of a century made that institution the pride of the State and the admiration of the South? Need I tell you of Thos. L. Clingman, soldier, statesman, jurist, scientist and scholar? Need I tell you of Augustus W. Merrimon, whose energy, integrity and natural ability won for him eminence as a statesman and placed him in the very first rank as a jurist? Need I tell you of him whose firm hand and mighty heart, and mightier soul, guided and directed our people in the hour of greatest extremity? Who obtained clothing for the naked soldiers, release for those in prison, and in a thousand ways so cared for the interest of the people as to win for himself the name of the great war Governor of the South? Need I tell how he alone was able to redeem the State from the condition worse than war itself, and restore the light after fifteen years of night and gloom; and how later, in the Senatorial Chamber in Washington, at a time when it was difficult for a Southerner to obtain recognition, he by his heroic defence of North Carolina and the South won the admiration and applause of the very men whom he had opposed in battle? when the prejudice of party and hatred of sectionalism threat-

ened to trample North Carolina into the dust.

"His was the thunder---His the avenging rod,
The wrath---the delegated voice of God,
Which shook the nations through his lips, and blazed,
Till vanquished senates trembled as they praised."

Mr. President, these things are matters of history and there is no occasion for me to dwell upon them here. I simply refer to them in passing, that we in our admiration for tbe many beauties and attractions which surround us may not, in the intoxication of the present hour be unmindful that Asheville has enjoyed a glorious past.

The roll was called.

The President then read his Message.

On motion of Dr. H. B. Weaver of Asheville, seconded by Dr. C. J. O'Hagan of Greenville, a committee was appointed to take charge of the President's Message and report on the several recommendations contained therein.

Dr. M. H. Fletcher of Asheville, Dr. H. A. Royster of Raleigh, Dr. C. M. Poole of Craven, were appointed a committee on credentials.

Dr. A. G. Carr of Durham, Dr. R. H. Speight of Wrendale, Dr. T. S. McMullan of Hertford, were appointed a committee on finance.

Dr. H. A. Royster of Raleigh, made a motion to extend the courtesy of the floor to visiting members of the profession, which was carried.

The President called up the section on Practice of Medicine, and the chairman, Dr. Benj. K. Hays of Oxford, made his report on "The Continued Fevers of North Carolina."

Dr. Hays' paper was discussed by Drs. John Hey Williams, J. A. Reagan, H. A. Royster, S. D. Booth and C. J. O'Hagan.

On motion, the paper was reerred to the committee on publication.

The committee on credentials made a partial report.

Drs. E. C. Levy and John P. Davidson presented credentials as delegates from the Medical Society of Virginia.

Dr. J. M. Baker of Tarboro, announced that Miss Minerva Pittman, the daughter of the late Dr. N. J. Pittman, for many years an honored member of this Society, desired to give a prize of one hundred dollars in cash to be competed for annually by members of the Society, under such rules as it should see proper to establish. She desires to impose only one condition, that the award should be made for original work or investigation upon any subject pertaining to medicine, leaving all other conditions to the pleasure of the Society. Miss Pittman hoped the Society would see fit to accept this offer, so that the award might be made at this meeting.

It was moved that the offer be accepted. Dr. Long offered an amendment that a committee of three be appointed to have this matter in charge, and said that it was fitting that the Society should recognize this generous offer, and very proper that the name of Dr. Pittman should be recalled at the annual meetings in this way; that it was an inspiration to the young men and a pleasure to the old men to recall his useful life and valuable services.

Dr. O'Hagan said that he had had the honor of knowing Dr. Pittman well and intimately; that what struck him in the offer was the filial piety of the young lady, and the interest she took in the advancement of the medical profession of which her father was such a distinguished member. Motion seconded and carried.

The reading of the paper on "Clinical History and Prognosis of Continued Fever as seen in the Mountain Section of North Carolina," by Dr. J. Howell Way, was postponed on account of the unavoidable absence of Dr. Way.

Dr. W. L. Robinson of Danville, being also unavoidably detained, the reading of his paper on "Treatment of Typhoid Fever, was postponed.

On motion, the Seciety adjourned until 3:30 P. M.

Afternoon Session.

The Society was called to order at 3:30 P. M., by the President.

The credential committee made a partial report.

The report of the section on Practice of Medicine was continued by a paper on "Typhoid Fever as met with in Fayetteville and Surrounding Country," read by Dr. J. F. Highsmith of Fayetteville. Discussed by Dr. O'Hagan.

On motion, Dr. Highsmith's paper was referred to the committee on publication.

A paper on "Chronic Gastro-Intestinal Catarrh," was read by Dr. Wm. J. McAnally of High Point. Referred to the committee on publication.

Dr. E. B. Glenn of Asheville, read a paper on "Study of the Bacteriology of Specific Urethritis." Discussed by Prof. E. C. Levy of Richmond, Va. Paper was referred to the committee on publication.

Dr. Paul Pacquin of Asheville, discussed "Biology and Pathology of Mixed Infection in Tuberculosis."

The following committee was appointed on the Pittman prize: Julian M. Baker, M.

D., Geo. W. Long, M. D., J. P. Munroe, M. D.

The following committee was appointed to report on the President's address: Drs. C. J. O'Hagan, R. H. Lewis, Geo. Gillett Thomas.

It was moved and seconded that the stenographer reporting last year's meeting be paid a balance of $14.65. Carried.

The Treasurer stated that, in the regular routine of his work, he had sent, among other bills, one to Dr. R. W. Mills, to which he had received the following reply:

TROUTMANS, N. C., Aug. 2, '98.

Dear Doctor:—Yours of recent date is to hand, and in reply will say my condition is such, from age and infirmities, also straitened circumstances, as stated to your predecessor, I am totally unable to pay any dues to the treasurer of the State Medical Society. I hope you will not construe this as any want of generosity, but simply the want of ability. I, as many other medical practitioners, have large accounts due me, but unable to collect any, hence with no income leaves me in no condition to pay any kind of assessments as taxes. Hoping this might prove satisfactory—I am near seventy-five years of age, eye-sight almost gone.

Fraternally yours,

R. W. MILLS, M. D."

It was unanimously declared that Dr. Mills dues be remitted, and that he be permitted to remain a member of the State Medical Society during his life time without further payment of dues.

The President read the following letter:

STATE OF NORTH CAROLINA,
Insurance Department,
Raleigh, N. C., May 15, '99.

DR. L. J. PICOT, President,
Littleton, N. C.

My Dear Doctor: I see that your society is to meet in Asheville about the 1st of June, and I take the liberty of enclosing you, under separate cover, a copy of our new Insurance Laws, and of calling your attention to section 58 of the same. You will find upon examination of it, that no life insurance company can now issue a policy in this State without an examination by the registered medical practitioner. This, I take it, will be of some interest to you and your profession, and I would be glad to have you call the attention of your Society to the same in your annual address, saying that I have called it to your attention, and urge them to lend their aid in seeing that it is carried out. Not only as a matter of personal interest to them individually, but as one that will be of great advantage to the people of the State, and the insurance interest.

Very truly yours,

J. R. YOUNG,
Insurance Commissioner.

On motion the Society adjourned.

SECOND DAY—MORNING SESSION.

The Society was called to order at 10 A. M. by the President.

The following committee on Nominations was appointed: Drs. H. B. Weaver, H. H. Harris, J. M. Baker, B. F. Halsey, George L. Kirby.

The Finance Committee made the following report, which was received and adopted.

We, your Finance Committee make the following report after examining the books and vouchers of the Secretary and Treasurer:

To balance on hand June 5, '98		$561 64
May 5. To am't collected from members.		42 00
Aug. 1. To am't collected from members,		34 00
1899.		
Ap'l 25. To am't collected from members		86 00
May 29. To am't collected from members		29 00
		$752 64

EXPENSES.

1898.			
May 5.	Paid	M. P. Perry, Treasurer....	$100 00
" 30.	"	Stenographer.....	25 00
" 2.	"	Observer Printing House..	3 75
" 4.	"	R. D. Jewett.....	305 86
July 2.	"	News and Observer.....	2 80
July 8.	"	Stationery.....	3 00
Sept. 30.	"	Postage.....	4 16
1899.			
May 29.	"	Postage.....	36
			$444 93
Balance on hand May 31, 1899.....			$307 71

We recommend the usual assessment of $2.00 per capita. That the salary of the Secretary be $100.00, and that of the Treasurer $75.00 for the ensuing year. We also again urgently recommend that the Treasurer notify each delinquent member of his indebtedness, and request an early settlement of the same. We would also recommend that the stenographer be employed at a maximum salary of $25.00. We recommend that the proposed resolution of Dr. J. P. Monroe be considered in connection with this report.

Dr. J. P. Monroe withdrew his resolution heretofore introduced, which reads as follows:

Resolved, that Article III, Section 2, be amended by adding to it the following: But any licentiate who shall apply for membership in this society at the current meeting during which he has been licensed by the Board of Examiners, and be recommended by the Committee on Credentials,

shall be admitted without paying the initiation fee of $5.

On motion the report was received, and the committee discharged in so far as these particular reports are concerned.

Dr. C. S. Mangum, of Chapel Hill, Chairman on section of Materia Medica and Therapeutics, presented a paper on "Progress in Serum Therapy," which, on motion, was referred to the Committee on Publication.

The Obituary Committee reported as follows:

At the meeting of the Society in Raleigh in 1893 the death of Dr. S. S. Satchwell was reported, and a number of eulogistic speeches make by the older members who had been associated with him for years. So highly was he esteemed by the Society, that his case was referred to a special committee to report suitable resolutions in regard to his useful life, his love for the Society, and his great interest in the health of the State. Owing to sickness, and the death of one of the committee, the report has been delayed, but is now submitted as follows:

IN MEMORIAM.

SOLOMON SAMPSON SATCHWELL, A.M., M.D.

Dr. Satchwell was born in Beaufort County, N. C., October 26th, 1821, and died at his home, Burgaw, Pender County, October 9th, 1892, in the seventy-first (71) year of his age.

He was educated at Wake Forest College, studied medicine with Dr. John Norcom, of Washington, N. C., and at the Medical Department of the University of New York, receiving his degree of Doctor of Medicine from that Institution in the Spring of 1850. He remained in New York for eighteen months studying medicine after receiving his degree.

He then returned to his home in Beaufort County, N. C., near Washington, and began the practice of his profession, and remained there until 1854, when he moved to Long Creek, in Pender County, N. C. He practiced his profession in this county until 1860, when he went to Paris, France, to pursue the study of medicine. He was one among the first members of this Society, which he loved and served faithfully up to his death. It afforded him pleasure to attend the meetings of the Society and he rarely came to one empty handed. He attended the meetings of the Society when it was possible for him to do so.

The Society appreciated his interest in and devotion to its welfare and conferred upon him almost every honor within its gift; electing him Secretary in 1854, 1855 and 1856, Co-Editor of the North Carolina Medical Journal, with Dr. Chas. E. Johnson in 1859, when the Journal was published by the Society.

He was elected a member of the second Board of Medical Examiners for six years, from 1866 to 1872.

He was elected President of the Society and presided at the meeting in 1868.

He was the first one to make a move for the establishment of the Board of Health for this State.

Single handed and almost entirely alone, he worked for and succeeded in securing the establishment of the Board of Health, by the Legislature. He was elected the first president of the Board, and to him the profession of medicine and the public are indebted for whatever good the Board has accomplished.

Dr. Satchwell returned home from Paris in the Spring of 1861, upon the beginning of the great war and entered the Confederate Army as the Surgeon of the 25th North Carolina Regiment, then Col. Clingman's regiment. He served with Clingman's command until the Spring of 1863, when he was assigned to duty as Surgeon in charge of the general hospital at Wilson, N. C., afterwards known as general hospital No. 1, in the general hospital district of North Carolina. He continued in the faithful discharge of all his duties here until the end of the war in April 1865.

The conduct and management of the hospital reflected great credit and honor upon him and all his assistants under his charge. This hospital was reported to the Surgeon General of the Confederate States in the Spring of 1865 as one among the best general hospitals of the Confederate States, by Surgeon Chopin, of New Orleans, who was the Medical Inspector on General Beauregard's staff, and who said that he had inspected the general hospitals in every district of the Confederate States.

At the end of the war, in April 1865, he returned to his home at Burgaw, in Pender County, and devoted himself to the practice of his profession and the welfare of his fellow citizens, until his death October the 9th, 1892.

He died of Typhoid Fever, while in attendance of several patients with that disease, whom he visited while so sick himself that he had to be lifted into and taken out of his buggy when he called upon them.

He was true, devoted and faithful to every duty, through a long and useful life, even unto death.

He served his patients, his State and the Confederate States, truly, loyally and devotedly.

Resolved, that in the death of Dr. Satchwell, this Society has lost one of its oldest and most devoted members, full of years and the honors of this Society, and expresses its appreciation of his life, character and reputation, and deplores its loss caused by his death.

Resolved, that one or more pages in the records be devoted to the memory of Dr. Satchwell, and that the Society extend its sympathy to his family in their great loss and in their bereavement at his death.

Resolved, that the secretary be instructed to send a copy of this memoir and resolutions to the family of Dr. Satchwell.

GEO. W. LONG, Chm'n,
J. A. REAGAN,
C. J. O'HAGAN.

Dr. Charles Eugene Hilliard was born in Asheville August the 24th, 1864, was educated up to the times, in Asheville, graduated from Jefferson Medical College, Philadelphia, in the Class of '88, died December 19th, 1898.

It is thought by many that a young man has a more difficult chance for success, in his profession at home where he has mixed with the men of his age, than among strangers, but while this may be the case with some, it was not the case with Dr. Hilliard. He at once entered into a fine practice, and retained it with increasing popularity as a man and a physician. But few men of his age stood higher in the profession among the physicians and the people than did Dr. Hilliard. His father was one of the leading physicians of this section, and his son was reflecting honors on the name when he was suddenly called to leave all that were dear to him. He had been visiting patients, came home and was eating his supper when he was suddenly taken sick and died in a few minutes. He was loved and honored by all who knew him.

J. A. REAGAN,
C. J. O'HAGAN,
GEO. W. LONG.

"Whom the gods love die young"! Dr. Brown was born in Pitt county, near Greeneville. He was —— old and decended from one of the oldest and most respected families in the county. His father gave him a splendid education, both academic and collegiate. At an early age he selected medicine as his vocation in life, and after two years purilage he entered Bellevue Medical College, from which he graduated with distinction, after three years study. He became partner of his preceptor with whom he practiced for twelve years in the discharge of his professional duties. He was distinguished by zeal, industry and speedily secured confidence and respect of his patients. He had decided talent for surgery, and if his life had been spared he would have been distinguised in his favorite branch. He died ——— universally loved and respected.

GEO. W. LONG,
J. A. REAGAN,
C. J. O'HAGAN.

Dr. George A. Foote was born in Warrenton ————, studied medicine with Dr. O. F. Manson, granduated from———— ————College————, settled in Warrenton and practiced successfully until the breaking out of the civil war, when he joined the Confederate army and served throughout the entire war, distinguishing himself especially in the assault and capture of Ft. Fisher, where he displayed conspicuous gallantry in the discharge of his professional duties under the most terrific fire known in the annals of war. He was an active and devoted member of the Medical Society of the State which rewarded him by the bestowal of the highest honors within its gift. As a near and dear physician he won the honor and respect of all with whom he was brought in contact. After a lingering illness he died regretted and mourned not only by the community in which he lived and worked so faithfully and long but also by this Society.

Resolved, That a copy of this report be spread upon our minutes and that the Secretary forward a copy to the family.

GEO. W. LONG, Ch'm,
J. A. REAGAN,
C. J. O'HAGAN.

The report of the Board of Medical Examiners was then made through their Secretary, Dr. Thos. E. Anderson of Statesville, as follows:

Mr. President and Gentlemen of the North Carolina Medical Society:

The Board of Medical Examiners, instituted by yourselves, having completed its work, desires through me, its Secretary, to submit the following report:

The Board began its work Thursday afternoon, the 25th inst., and has been, with the exception of Sunday intervening, in almost continuous session, having finished this morning at 6:30 after an all night session. Our roll shows that 112 names have been registered, the number of applicants being 112. These applicants represent 40 medical colleges or schools. The list shows that the University College of Medicine of Richmond, Va., leads all the rest in numbers, there being from this Institution 19 applicants, only one of which is an undergraduate. The next in point of numbers is the University of Maryland, it furnishing

12 applicants, one of whom is an undergraduate. The North Carolina Medical College stands next in order and presents 10 applicants for license, 6 of whom are non-graduates. The University of Nashville, Medical College of Virginia and Vanderbilt University each furnish 5, and out of the 15 three are non-graduates. The Kentucky School of Medicine furnishes 4, three of whom are non-graduates. The Ohio Medical College, Baltimore Medical, Jefferson Medical College and Long Island College Hospital, all furnish three each, and out of the 12 thus furnished, one only is an undergraduate. The Medical Department of the University furnishes two first course men. Atlanta College of Physicians and Surgeons, Leonard Medical College, Chattanooga Medical College, Baltimore University, Medico-Chirurgical of Philadelphia, Pa., Medical College of South Carolina, Tulane University of Louisiana, Physicians and Surgeons Baltimore, Bellevue, and University of New York, each furnish two, making 18, all graduates in medicine. University of Tennessee, Missouri Medical, Georgetown University, University of Pennsylvania, Chicago School of Homeopathy, Medical College of Alabama, Columbia University of Washington, D. C., University of Louisville, Ky., Medical Department National University of Georgetown, D. C., University of Leipsic, Germany, St. Louis Medical College, Physicians and Surgeons of New York, Alabama Medical College, University of Virginia, Southern Medical College of Atlanta, Ga., University of Georgia, the Laura Memorial Medical College of Cincinnati, Ohio, and Medical College of Maine, all furnish one each, all of whom are full graduates except one, making a total of 112. Of this number two, mindful that coming events cast their shadows before, withdrew. Of the 112 applying, 95 are graduates, 17 are non-graduates.

After a careful, painstaking, if not painful, and deeply conscientious consideration of the papers presented by this large and unprecedented number, we have, after careful consideration and revision placed in the hands of those whose names appear below our license to practice medicine in the State, with all the immunities, privileges, &c., appertaining:

Among the applicants for license before the State Board of Medical Examiners this year, the highest grade was made by L. H. Love of Wilmington, with 96 per cent. W. E. Miller of Burlington came next with a percentage of 94 5-7; S. W. Schell of Lenoir, 92 5-7, and Chauncey Bakestraw of Charlotte, a near fourth with 92. Thirteen others made over 90 per cent.

The following is the list of the successful applicants:

William P Isley, Burlington, J M Newbern, Powells Point, Charles L Scott, Mebane, W C Lauderdale, Asheville, J D MacRae, Fayetteville, J F Peavy, Asheville, J S Wise, Chester, S. C., J W Slate, Quaker, Paul Paquin, Asheville, G W Hays, Lancaster, Ky., J P Whitehead, Rocky Mount, B W Fassett, Cross Roads Church, A W Calloway, Asheville, J D Heathman, Woodleaf, D G McKethan, Fayetteville, N C Hunter, Enfield, W G Leak, Francisco, T W Davis, Louisburg, T W Shore, Booneville, R F Yarborough, Louisburg, H S Monk, Newton Grove, W W Duson, Asheville, W E Miller, Burlington, C C Joyner, Greenville, H G Heilig, Salisbury, D W Griffin, Reppetoe, J S Slate, Mizpah, A R Winston Franklin, O S Smith, Waycross, J H Peeler, Faith, J E Nobles, Greenville, H H Boss, Rocky Mount, H R Moore, Burlington, W M White, Statesville, C W Banner, Mt. Airy, Geo H Ross, Oakdale, R G Rozier, Rozier, R T S Steele, Rockingham, H M S Cason, Edenton, T C Quickel, Lincolnton, R D Holt, Smithfield, F D Drewry, Garysburg, H C Houston, Walkups, F A Ward, Gliden, T B Tyson, Covington, D A Boyd, Plott, G W Cardwell, Reidsville, R M Roberson, Pittsburg, I W Lann, Siler City, L A Walker, Stone Creek, R E Hollingsworth, Mt Airy, E J Widby, Lenoir, J B Wright, Coharie, S W Schell, Lenoir, Wm Fountain, Tarboro, W O Nisbet, Waxhaw, J M Covington, Rockingham, G M Van Poole, Craven, C S Maxwell, Mt Olive, J T Smith, Westfield, Edmond Gladmon, Southern Pines, James A Smith, Raleigh, J R Thompson, Colly, T L Brooks, Black Creek, J C Hall, Star, O L Ray, Bangor, Geo H Kirby, Raleigh, J P Wimberly, Rocky Mount, Calvin M Case, Asheville, Robert L Felts, Charlotte, Chauncey Rakestraw, Charlotte, W D Price, Charlotre, H McKee Tucker, Raleigh, T L Fox, Franklinville, D L Fox, Worthville, L H Love, Wilmington, T M Copple, Lexington, W J Meadows, McAdenville, W H Smith, Marshville, A B Drafts, Lexington, W T Parrott, Kinston, I H Manning, Wilmington, Ida M Wilson, Charlotte, S H von Ruck, Asheville, Louise Anderson Merrimon, Asheville, L Warren Achorn, Boston, T O Joyner, Seaboard.

Dr. Anderson further said: "The Board exposed one of the most infamous attempts to secure a license that has come to our knowledge, wherein a young native of this State went to Baltimore and secured a young man from one of the institutions, which place he had secured by competitive exam-

ination, brought him here, registered in the name of this North Carolina young man, and was regularly proceeding to take our examination, when a little bit of data in my hands enabled me to get after it, and after questioning him and looking after him pretty sharply, he found that he was detected and disclosed the whole scheme. He said that he was prompted purely by friendship to this young fellow, who had been a classmate of his, and who felt very certain he could not stand the examination, and he came here representing that fellow, but unfortunately he had not studied his part well. He knew the town he was from, but did not know his county. He said he had been out of the State four or five years, was the reason he forgot his county. I asked him about some other citizens of that county, and he knew nothing whatever, and he saw he was detected, and he told the whole thing and left on the first train. A very infamous thing indeed. He said he would never do anything of that kind again.

I would like to give notice that we will immediately issue licenses to the successful gentlemen, and that we have some very nice blanks on parchment which will cost $1.00. Anybody wishing them will please notify me.

The Committee on Legislation reported as follows:

REPORT OF COMMITTEE ON LEGISLATION.

Your committee respectfully beg leave to report:

In 1849 the State Medical Society was organized by a handful of our leading physicians. Ten years afteawards, just forty years ago, it was incorporated by the General Assembly, and in the same bill were embodied provisions for regulating the practice of medicine in this State, requiring a license from a Board of Examiners to be elected by the Society. The penalty was inability to collect fees at law. According to our recollection, this was, with the exception of a meagre law enacted by the Legislature of New York early in the century, but which fell almost immediately into "innocuous desuetude," and therefore should not count—the first attempt made in the United States to regulate the practice of medicine. For many years ours was the only law of the kind in the country, and slow old North Carolina was the leader in this important movement.

In 1885, chiely through the efforts of the late deeply lamented Dr. Thomas F. Wood, of Wilmington, the law was amended by making it a misdemeanor, punishable by fine and imprisonment to practice without license.

In 1889 the registration feature was added—the act allowing all in practice at the time to register whether licensed or not, but closing the doors finally on January 1, 1892, to all except those holding a license from the Board of Medical Examiners.

While the Acts of 1885 and 1889 greatly strengthened the law, two serious defects remained to be cured. One was the right of any one, whether properly educated in medicine or not, to apply for license, and the other was the practical ability of the Board, owing to the fact that its examinations were necessarily theoretical, to ascertain whether the applicant had received the necessary clinical instruction. To cure these defect your Committee on Legislation, believing that public opinion had grown up to this point, and that the time was ripe for making the effort, drew a bill embodying these amendments and secured its enactment by the General Assembly of 1899. It received a unanimously favorable report from the Judiciary Committees of both the Senate and House, and passed the Senate unanimously, but met with active opposition in the House, much to our surprise, as no one outside the Legislature, or in it, so far as known, was against it. The argument against it was directed chiefly to the provision requiring a diploma from a college requiring an attendance of three years, the speakers holding that it would debar some ambitious young men of limited means from entering the profession, the insinuation being made that the bill was a scheme on the part of the physicians now in practice to form a "doctor's trust," and reduce competition. We know that this idea did not enter the minds of your committee, and that we were actuated by only two motives—the still further elevation of our profession and the more certain protection of the people against incompetency on the part of their medical advisers. Instead of lessening competition, the effect of the amendment will be to increase it by insuring the more thorough preparation of the new men coming in from year to year, while it will not sensibly diminish the number. There is no danger of a failure in the crop of doctors. Admitting that the requirement of a diploma from a respectable college—no college requiring less than three years attendance can now be called respectable—will prevent a few young men from following the profession of medicine instead of some other calling equally honorable and frequently more lucrative, it should not even be so much as named in comparison with the greater protection to the health and lives of the people of the whole State. We feel that the

ackwledgments of the Society and of the people of the State are due the gentlemen of the Legislature who supported the bill by speech and vote. Among so many friends we would not make any invidious distictions, but we feel that it would be proper to mention particularly the Hon. M. H. Justice, of Rutherford, who introduced and championed the bill in the Senate, securing its passage without a dissenting vote; the Hon. B. E. Reeves, M. D., the Representative from Ashe, who led the fight for it in the House, and the Hon. H. G. Connor, of Wilson, Speaker of the House, who becoming concerned for the pasasge of the bill, left the Speaker's chair and advocated it on the floor in a speech of great weight, in the course of which he took occasson to pay an eloquent tribute to the physician—the country doctor in particular.

RICHARD H. LEWIS, Ch'm,
for the Committee.

AN ACT TO AMEND CHAPTER THITY-FOUR OF THE CODE AND CHAPTER ONE HUNERED AND EIGHTY-ONE OF THE LAWS OF 1889.

The General Assembly of North Carolina do enact :

SECTION 1. That chapter thirty-four of The Code be amended by inserting after the word "applicants" in line two of section three thousand one hundred and twenty-four, the following words: "who shall exhibit a diploma, or furnish satisfactory proof of graduation, from a medical college in good standing requiring an attendance of not less than three years and supplying such facilities for clinical instructiot as shall meet the approval of the said Board"; and by adding immediately after said section three thousand one hundred and twenty-four the following words: "*Provided*, that the requirement of three years' attendance shall not apply to those graduating prior to January first, 1900. *Provided further*, that license or other satisfactory evidence of standing as a legal practitioner in another State shall be accepted in lieu of a diploma and entitle to examination."

SEC. 2. That section three thousand one hundred and twenty-five of The Code be amended by inserting after the word "applicant" in line three, the following words: "who shall comply with the requirements as to graduation prescribed in section three thousand one hundred and twenty-four as amended."

SEC. 3. That section three thousand one hundred and twenty-seven of The Code be amended by adding immediately after said section the following words: *Provided*, That the said Board may, in its discretion, meet not more than one week before the said society, but always in the same place; and that one additional meeting in each year may be held at some suitable point in the State if deemed advisable."

SEC. 4. That chapter one hundred and eighty-one of the Laws of 1889 be amended by striking out all of section three from the word "words" in line four down to the word "any" in line nine. the word "likewise" in line eleven and the word "such" in line fourteen; by striking out in section four all from the word "or" in line three to the number "1885" in line six, inclusive, and the words "on oath" in line seven; and by striking out in section seven all after the word "act" in line three.

SEC. 5. That this act shall be in force from and after January first, 1900,

So that the laws, as amended to date, read as follows:

THE LAWS REGULATING THE PRACTICE OF MEDICINE IN NORTH CAROLINA.

(*From The Code*).

SECTION 3121. MEDICAL SOCIETY OF THE STATE, A BODY POLITIC. PRIVATE LAWS, 1858-'9, C. 258, S. 1:

The Association of regularly graduated physicians, calling themselves "The State Medical Society," is hereby declared to be a body politic and corporate, to be known and distinguished by the name of "The Medical Society of the State of North Carolina."

SEC. 3122. WHO MAY PRACTICE. 1858-'9, C. 258, S. 2:

No person shall practice medicine or surgery, nor any of the branches thereof, nor in any case prescribe for the cure of diseases for fee or reward, unless he shall have been first licensed so to do in the manner hereinafter provided.

SEC. 3123. BOARD OF PHYSICIANS TO CONSIST OF SEVEN. 1858-'9, C. 258, SS. 3, 4:

In order to the proper regulation of the practice of medicine and surgery, there shall be established a Board of regularly graduated physicians, to be known by the title of "The Board of Medical Examiners of the State of North Carolina," which shall consist of seven regularly graduated physicians.

SEC, 3124. DUTY OF BOARD. 1858-'9, C. 258, S. 5:

It shall be the duty of the said Board to examine all applicants who shall exhibit a deploma, or furnish satisfactory proof of graduation, from a medical college in good

standing requiring an attendance of not less than three years and supplying such facilities for clinical instruction as shall meet the approval of the said Board, for license to practice medicine or surgery, or any of the branches thereof, on the following branches of medical science: Anatomy, Physiology, Surgery, Pathology, Medical Hygiene, Chemistry, Pharmacy, Materia Medica, Therapeutics, Obstetrics, and the Practice of Medicine, and if on such examination they be found competent, to grant to each applicant a license or diploma, authorizing him to practice medicine and surgery, or any of the branches thereof *Provided*, five members of the Board shall constitute a quorum and four of those present shall be agreed as to the qualifications of the applicant: *Provided*, that the requirement of the years' attendance shall not apply to those graduating prior to January first, 1900. *Provided further*, that license or other satisfactory evidence of standing as a legal practitioner in another State shall be accepted in lieu of a diploma and entitle to examination.

Sec. 3125. Temporary License. 1858-'9, c. 258, ss. 7:

To prevent delay and inconvenience, two members of the Board of Medical Examiners may grant a temporary license to any applicant who shall comply with the requirements as to graduation prescribed in section three thousand one hundred and twenty-four as amended, and make report thereof to the next regular meeting of the Board: *Provided*, such temporary license shall not continue in force longer than the next regular meeting of the Board, and such temporary license shall in no case be granted after the applicant has been refused a license by the Board of Medical Examiners.

Sec. 3126. How Appointed. 1858-'9, c. 258, s. 9:

The Medical Society shall have power to appoint the Board of Medical Evaminers.

Sec. 3127. Where and When to Assemble. 1870-'1, c.—, s. 11:

The Board of Medical Examiners shall assemble at the same time and place when and where the Medical Society assembles, which Society shall assemble at least once in every year at such time and place as the said Society, at its next preceding meeting, shall have fixed; and the said Board shall remain in session from day to day until all applicants who may present themselves for examination within the first five days after its meeting shall have been examined and disposed: *Provided*, That the said Board may, at its discretion, meet not more than one week before the said Society, but always in the same place; and that one additional meeting in each year may be held at some suitable point in the State if deemed advisable.

Sec. 3128. Officers, etc. 1858–'9, c. 258, s. 11.

The Board of Medical Examiners are authorized to elect all such officers and to frame all such bylaws as may be necessary, and in the event of any vacancy by death, resignation or otherwise, of any member of said Board, the Board, or a quorum thereof, is empowered to fill such vacancy.

Sec. 3129. The Board of Examiners to Keep a Record. 1858–'59, c. 258, s. 12.

The Board of Examiners shall keep a regular record of its proceedings in a book kept for that purpose, which shall always be open for inspection, and shall cause to be entered on a book kept for the purpose the name of each applicant licensed to practice medicine and surgery, and the time of granting the same, together with the names of the members of the Board present, and shall publish the names of those licensed in two of the newspapers published in the city of Raleigh, within thirty days after the granting of the same.

Sec. 3130. License. 1858–'59, c. 258, s. 13.

The Board shall have power to demand of every applicant thus licensed the sum of ten dollars before issuing a license or diploma, and the sum of five dollars for each temporary license, to be paid to the Secretary of the Board.

Sec. 3131. The Board; Their Compensation. 1870–'71, c. —, s. 14.

The members of the said Board shall each receive as a compensation for their services four dollars per day during the time of their session, and in addition thereto their traveling expenses to and from their places of meeting by the most direct route from their respective places of residence, to be paid by the Secretary of the Board out of any moneys in his hands, upon the certificate of the President of the Board of Medical Examiners.

Sec. 3132. Practicing Without License. 1858–'9, c. 258, s. 15; 1885, c. 117 and 261.

Any person who shall practice medicine or surgery without having first applied for and obtained license from the said Board of examiners, shall not be entitled to sue for or recover before any court any medical bill

for services rendered in the practice of medicine or surgery or any of the branches thereof. And any person who shall begin the practice of medicine or surgery in this State for fee or reward, after the passage of this act, [March 7th, 1885] without first having obtained license from said Board of Examiners, shall not only not be entitled to sue for or recover before any court any medical bill for services rendered in the practice of medicine or surgery, or any of the branches thereof, but shall also be guilty of a misdemeanor, and upon conviction thereof shall be fined not less than twenty-five dollars nor more than one hundred dollars, or imprisoned at the discretion of the court, for each and every offence: *Provided*, this act shall not be construed to apply to women who pursue the vocation of a midwife: *And provided further*, that this act shall not apply to any reputable phycician or surgeon resident in a neighboring State or coming into this State for consultation with a registered physician resident therein. But this proviso shall not apply to physicians resident in a neighboring State regularly practicing in this State: *Provided*, that this section shall not apply to physicians who have a diploma from a regular medical college, and were practicing medicine or surgery in this State prior to the seventh day of March, one thousand eight hundred and eighty-five.

Sec. 3133. May Rescind License. 1858–'59, c. 258, s. 16.

The said Board shall have the power to recind any lincense granted by them when, upon satisfactory proof, it shall appear that any physician thus licensed has been guilty of grossly immoral conduct,

Sec. 3134. Secretary. 1858–'9, c. 258, s. 17.

The Secretary of the Board of Medical Examiners shall give bond, with good security, to the President of the Board, for the safe keeping and proper payment of all moneys that may come into his hands.

Registration. 1889, c. 181, ss. 3 (in part), 4, 5, 6, 7.

Sec. 3. That chapter thirty-four of The Code be amended by striking from section three thousand one hundred and twenty-five the words "for confirmatian," and by adding immediately after section three thousand one hundred and thirty-four the following words: "Any person who shall begin the practice of medicine or surgery in this State after the passage of this act, shall personally apper before the Clerk of the Superior Court of the county in which he resides or practices within thirty days after obtaining a license from the Board of Medical Examiners of the State, as now provided by law for registration."

Sec. 4. That any person applying for registration as herein provided shall produce and exhibit before the Clerk of the Superior Court a license obtained from the Board of Medical Examiners aforesaid; and upon such exhibit being made as aforesaid, the clerk shall register the date of registration with the name and residence of such applicant in a book to be kept for this purpose in his office, marked "Register of Physicians and Surgeons," and shall issue to him a certificate of such registration under the seal of the Superior Court of the county upon the form furnished him, hereinafter provided, for which the Clerk shall be entitled to collect a fee of twenty-five cents. The person obtaining said certificate shall be entitled to practice medicine or surgery, or both, in the county where the same was obtained, and in any other county in this State; but if he shall remove his residence to another county he shall exhibit the said certificate to the clerk of such other county and be register. ed, which registration shall be made by said clerk without fee or charge, *Provided*, that any one having obtained a temporary license, as provided in section three thousand one hundred and twenty-five of The Code, shall not be entitled to register, but may practice during the time such license shall remain in force.

Sec. 5. That any person who shall practice medicine or surgery in this State without first having registered and obtained the certificate as aforesaid shall be guilty of a misdemeanor, and upon conviction thereof shall be fined not less than twenty-five dollars, nor more than one hundred dollars, or be imprisoned at the discretion of the court, for each and every offence: *Provided*, this act shall not apply to women pursuing the vocation of midwife, nor to reputable physicians or surgeons resident in a neighboring State coming into the State for consultation with a registered physician of this State.

Sec. 6. That any Clerk of the Superior Court who shall register or issue a certificate to any person in any other manner than that prescribed by this act shall be guilty of a misdemeanor, and upon conviction thereof shall be fined not less than two hundred dollars and shall be removed from office.

Sec. 7. That it shall be the duty of the Medical Society of the State of North Carolina to prescribed a proper form of certificate required by this act.

CONJOINT MEETING.

The hour having arrived for the conjoint meeting with the N. C. State Board of Health, Dr. Geo. Gillet Thomas of Wilmington, President of the Board, called the conjoint meeting to order. The President made his address.

The Secretary, Dr. Richard H. Lewis of Raleigh, then made his report.

On motion of Dr. Picot, a vote of thanks was tendered Dr. Lewis, not only for the excellent report, but also for his work as chairman of the Committee on Legislation. Dr. Carr moved that the name of Dr. H.F. Long be included in this vote of thanks for his very efficient work as State Inspector. Unanimously carried.

Dr. H. F. Long of Statesville, then made his report as State Small-Pox Inspector. The report was received.

The President announced that for the ensuing two years the following appointments had been made for the State Board of Health:

Appointments by the Governor: Chas. J. O'Hagan, M. D., J. L. Nicholson, M. D., Albert Anderson, M. D., Richard H. Lewis, M. D., and Col. A. W. Shaffer, Sanitary Engineer

The ballot of the Society was then cast for the following four to serve on the Board: S. W. Battle, George G. Thomas, Henry W. Lewis and H. H. Dodson.

On motion, the session was then adjourned.

AFTERNOON SESSION.

The Society was called to order by the President at 2:30 P. M.

The committee appointed to report on the President's address reported as follows:

Your committee, to whom was committed the admirable Message of the President for report, beg leave to say:

That careful study of the thoughtful suggestions of our chief executive officer leads us to offer you the following resume and endorsement.

We heartily concur with the opinion that it is unwise to encourage the formation of Medical Societies in North Carolina that will directly or indirectly detract from the general Medical Association. Here is the body which has been the source and soul of the advance movements that have made the record of which we all are so justly proud. It cannot be too often told that this Society was the pioneer of higher medical education. It was the wisdom of our grand Society who shaped out the course that has brought us to the safe haven in which we are resting. There are opportunities in its ranks for the exercise of the best intellects, and the satisfaction of the most vaulting ambitions. The elders of our members stand by the Society. Knowing its worth, and happy in the realization of the hopes of many years, the conservative members find in it the chance to be taught the newer thoughts and advancing ideas, and to the reseless energy and watchful and ready trained intellects of the younger men, it is a field forever ready for the work, and to them it has always yielded an abundant harvest. Let us resolve now and forever to cherish to the utmost of our powers the best interests of this organization, departing from the ways of those whose hopes of preferment or desires for the betterment of business ventures or personal ambitions would draw us from this untiring mother with new, untried and possibly useless association, originating in localities outside of North Carolina, and having as a cause of their being the upbuilding of one or other rival interests to which our people are to be dragged in as contributors. There is no good ground, we take it, for the two new societies in North Carolina, and we heartily agree with the President in his criticism and his appeals to the members of our own body to stay at home and labor zealously for the greatest good of the institution that has made the North Carolina doctor, the licentiate of the Board of Examiners, the peer and leader in the medical profession.

Regarding the recommendation of an organized insurance to be conducted within our ranks, we are heartily in favor of some such idea, if it can be materialized, but it needs most careful study and preparation, including the setting forth of plans, the scale of rates chargeable and the basis of assessment. We recommend that a committee of three, to be named by the President, himself to be one of it and chairman, be appointed to take this matter under advisement and report to the next annual session of the Society.

We regret that under the laws of North Carolina, regulating the practice of medicine, no reciprocity in the exchange of licenses can be considered. No doubt the time is at hand when some change necessary to enable one Board of Examiners to accept the licenses of other States having the same standard as our own, may be considered, and the matter could be wisely referred to the Committee on Legislation.

If the Society deems it wise it will add interest to the meetings to have a special report on Pediatrics, and the organization of the new section will be timely, and the suggestion of the President for it a most thoughtful one. To those of our members engaged in the railway surgical service, a

section devoted to that particular branch would certainly bring to the annual meetihgs much material which would interest and instruct not only those so especially engaged, but the whole Society as well.

In conclusion, we beg leave to congratulate the President upon his message, and the Society upon the selection of so able a leader for this year.

C. J. O'Hagan,
R. H. Lewis,
Geo. Gillet Thomas.

Referring to the report of the Committee in regard to the formation of Medical Societies in North Carolina, Dr. Cobb said: "The Tri-State Medical Society was intended for the upbuilding and uplifting of the profession and for the elevation of suffering mankind. It was not the intention of any of the members who composed that Society to injure in any way the Societies of the three States that compose it. One of the requisites of membership is that the applicant shall be a member of the Society of his State, and why should the State of North Carolina so degrade itself as to say that one of its members shall not join a Society outside of the State? While we have specialists and general practitioners, I am sorry to say that some of them are afraid to meet open competition of members from other States. I think that is very uncalled for, to say the least of it.

Dr. Booth: I did not hear all of the report of that Committee, which I regret very deeply, but I move that the report of the Committee be taken up and passed upon seriatum. Seconded and on vote rejected.

It was moved and seconded that the report be accepted as presented by the Committee. Carried.

Nominations for officers for the ensuing year being now in order, Dr. O'Hagan nominated Dr. Geo. W. Long for President in the following words:

In accordance with a rule that I have followed for many years, the results of which have been so satisfactory that I deem that rule the best one, and that rule is pushing the young men to the front. Therefore, in accordance with that policy I rise to propose the name of Dr. Geo. W. Long, of Graham. He has been a working member of this Society for many years. He has discharged satisfactorily every duty imposed upon him, and I am quite sure that he will justify the confidence I have in him. I beg leave to put in nomination George W. Long.

Dr, Thomas, in seconding this nomination, said: It gives me great pleasure to second this nomination. A long and very intimate acquaintance with Dr. Long encourages me to say in his favor all that Dr. O'Hagan has said, and as much more as the greatest imagination can picture.

Dr. Lewis moved that that nominations be closed, the rules supended, and the vote of the Society be cast for Dr. Geo. W. Long, of Alamance, for President. Unanimously adopted.

Nominations for Vice-President being now in order, Dr. Parrott nominated Dr. McMullin for First Vice-President, but on request of Dr. McMullin his name was withdrawn.

Dr. G. T. Sikes then nominated for First Vice-President, Dr. C. M. Poole. Seconded.

Dr. Williams was nominated for Second Vice-President by Dr. Speight. Seconded.

Dr. James M. Parrot, of Kinston, was nominated for Third Vice-President. Seconded.

For Fourth Vice-President Dr. W. D. Hilliard, of Asheville, was nominated by Dr. Parker. Seconded.

All unanimously elected.

Dr. Geo. W. Pressly, of Charlotte, the present Secretary, was nominated for Secretary, and the Treasurer instructed to cast the vote of the Society for Dr. Pressly.

Dr. G. T. Sikes, the present Treasurer, was nominated to succeed himself, and the Secretary instructed to cast the vote of the Society for Dr. Sikes.

Dr. Long, the incoming President, was presented with a boquet of flowers from the citizens and physicians of Asheville, to which he responded in a speech of thanks.

It being moved that the place of meeting for 1900 be selected, the unanimous vote of the Society was cast for Tarboro, The time was left in the hands of the local committee of arrangements.

On motion the Society adjourned.

Third Day—Moring Session.

The Society was called to order by the President at 10 A. M.

Dr. J. M. Baker, Chairman of the Committee on the Pittman prize, having requested that his name be withdrawn on account of his connection with the offering of the prize, Dr. Richard H. Whitehead, of Chapel Hill was appointed in his place.

The discussion on Dr. McKenzie's paper having been postponed on yesterday, it was concluded by Dr. McKenzie as follows:

I simply want to thank the gentlemen for the discussion, and there are also a few things I want to answer. One in regard to Dr. Herring's case. His case, I think,

was one of septicæmia, and I think the hot water he used, together with the assistance of Providence, saved his patient. Dr. McBrayer opposed the use of the original douche after delivery because he did not think it was the proper thing to use any old syringe lying around the house. Of course it is not. I always require them to use the fountain syringe, and boil the whole thing before using. You can easily teach any woman how to do that.

The Secretary read a letter from Dr. W. T. Cheatham, of Henderson, regretting his inability to be present, and wishing the Society a profitable session. Also from Dr. Joseph Price, of Philadelphia, who was to have read a paper before the Society but was unable to attend.

Dr. Goode Cheatham, of Henerson, Chairman of Section on Anatomy and Surgery, presented a paper on "Antisepsis in Surgery," which on motion was referred to the Committee on Publication.

Dr. F. T. Meriwether, of Asheville, presented a paper on "Some Remarks upon Coley's Treatment of Malignant Growths." On motion this paper was referred to the Committee on Publication.

"An Interesting case of Renal Calculus," presented by Dr. M. Bolton, of Rich Square, was on motion referred to the Committee on Publication.

Dr. R. E. Zachary, of Wilmington, presented a paper on "Gunshot Wounds with report of case," which on motion was referred to the Committee on Publication.

The Committee on Nominations make the following report:

For Orator, T. S. McMullan, Hertford; Essayist, R. H. Whitehead, Chapel Hill; Leader of Debate, J. M. Parrott, Kinston; Board of Censors, G. G. Thomas, Wilmington, L. J. Picot, Littleton, R. H. Speight, Wrendale, M. H. Fletcher. Asheville; C. M. Poole, Craven.

Committee on Publication: Drs. R. J. Brevard, G. W. Pressly, D. O'Donoghue, A. J. Crowell, Charlotte.

Committee on Legislation: Drs. R. H. Lewis, Raleigh; G. T. Sikes, Grissom; N. P. Boddie, Durham, L. J. Picot, Littleton, H. A. Royster, Raleigh.

Obituary Committee: Drs. K. P. Battle, Raleigh; P. L. Murphy, Morganton; G. W. Purefoy, Asheville.

Delegates to American Medical Association: Drs. A. G. Carr, Durham; H. B. Weaver, Asheville; S. D. Booth, Oxford; N. B. Herring, Wilson; C. P. Ambler, Asheville; G. L. Kirby, Raleigh; M. Olivia Nelon-Denison, Asheville; J. P. Munroe, Davidson, W. W. McKenzie, Salisbury.

Delegates to South Carolina Medical Society: Drs. J. A. Borroughs, Asheville; Annie Alexander, Charlotte; F. H. Russell, Wilmington; W. H. Wakefield, Charlotte.

Delegates to Virginia Medical Society: Drs. Anna M. Gove, Greensboro; H. W. Lewis, Alexander; C. L. Minor, Asheville; W. H. Ward, Plymouth; B. L. Long, Hamilton.

Delegates to American Public Health Association: Drs. A. A. Kent, Lenoir; Carl von Ruck, Asheville; J. W. Long, Salisbury; J. A. Reagan, Weaverville: S. H. Lyle, Franklin.

On motion, the Committee on Finance was discharged for this term.

Dr. McMullan then moved to re-consider that part of the Finance Committee's report reducing the salary of the Secretary and Treasurer, and that their salaries be placed at the former figures of $125 for the Secretary, and $100 for the Treasurer, as the receipts for this session have been in excess of what was expected by the Finance Committee. Seconded and carried unanimously.

The following resolution was offered by Dr. C. M. Poole:

Resolved, That the Transactions of the Society be hereafter bound in cloth, price, not to exceed 50 cents per copy." Seconded and adopted.

Dr. H. B. Weaver, of Asheville: A very important paper, and one which pertains to the living issues of the day was huriedly discussed yesterday. It was on Serum Therapy by Dr. Mangum. I have here some notes which I think will elicit some discussion, and which I would be glad to read,

(Dr. Weaver's notes will be found in the Discussion of Dr. Mangum's paper.)

Dr. J. E. S. Davidson read a paper on "Meningitis" which was referred to the Committee on Publication.

Dr. R. E. Zachary. then read a paper on "Pernicious Malarial Fever." which was referred to the Committee on Publication.

Society adjourned.

Afternoon Session.

The Society was called to order at 3:30 P. M.

The President announced that Dr. A. A. Kent is appointed a member of the committee on the Pittman Prize.

The papers of Drs. E. A. Moye of Greenville, on "Aconite Poisoning, its Diagnosis and Treatment, with a Report of a Case," and Dr. E. B. Goelet of Saluda, on "Electricity as an Aid to the Physician and Surgeon," was, by motion, referred to the

Committee on Publication without being read, the authors having been compelled to leave.

Dr. J. W. Long of Salisbury, presented a paper on "Ectopic Pregnancy."

Discussed by Drs. H. A. Royster and H. S. Lott. On motion, it was referred to the Committee on Publication.

Dr. Chas. L. Pearson of Asheville, presented a "Report of a Case of Carcinoma of the Lung with Tuberculosis." On motion, the paper was referred to the Committee on Publication.

W. B. Pritchard, M. D., of New York City, gave a "Report of a Case of Brain Tumor Relieved Symptomatically by an Exploratory Operation upon the Skull." On motion, the paper was referred to the Committee on Publication.

The papers of Drs. D. A. Staunton and Thos. F. Costner were referred to the Committee on Publication.

On motion, the paper of Dr. Robinson of Danville, on "Treatment of Typhoid Fever" was referred to the Committee on Publication, the author being unable to be present and read it.

The committee on the Pittman Prize reported that two papers were submitted for their consideration, but that neither were, in their opinion, of sufficient merit to win the prize of $100.00.

As a part of the report, the committee turned over to the Treasurer the $100.00 offered, which had been placed in their hands for disposition.

The Society then proceeded to the installation of officers. Dr. Lewis and Dr. Kent were appointed to escort the newly elected President to the chair. After being introduced, he said: Gentlemen of the Medical Society of North Carolina: I am deeply touched and impressed at the singular unanimity with which you have called me to preside over your deliberations. I thank you very much for this high mark of respect. This is a responsible position, and I promise you to use my utmost endeavors to discharge the duties of the place in the best interests of the profession. To aid me in that work I ask your earnest co-operation. I thank you, gentlemen.

The President appointed the following Chairmen of Sections:

Pathology and Microscopy—Dr. Carl V. Reynolds, Asheville.

Anatomy and Surgery—Dr. Arthur Pendleton, Warrenton.

Medical Jurisprudence and State Medicine—Dr. John McCampbell, Morganton.

Obstetrics—Dr. W. E. Russell, Hickory.

Gyæcology—Dr. B. Ray Browning, Littleton.

Practice of Medicine—Dr. W. E. Spencer, Yanceyville.

Materia Medica and Therapeutics—Dr. D. J. Hill, Lexington.

Chemistry and Physiology—Dr. L. P. Aaron, Mt. Olive.

Pediatrics—Dr. J. R. Irwin, Charlotte.

Railway Surgery—Dr. W. D. Hilliard, Asheville.

On motion by Dr. Lewis, the thanks of the Society were extended to the people of Asheville and the Buncombe County Medical Society, as well as the Oakland Heights Sanitorium, for the kind attention and hospitality shown them- Also to the Railway Company for reduction of rates.

On motion, the Society then adjourned to meet in Tarboro, the date to be fixed later.

L. J. Picot, M. D., President.
Geo. W. Pressly, M. D., Secretary.

THE FULL REPORT OF THE COMMITTEE ON CREDENTIALS.

Wm J McAnally, High Point.
T W Long, Catawba.
H M S Cason, Edenton.
W L Hilliard, Asheville.
John McCampbell, Morganton.
John B Wright, Coharie.
Paul Pacquin, Asheville.
S H Crocker, Moyeton.
G J Ganger, Tulin.
Mary O Nelon-Denison, Asheville.
Norman C Hunter, Enfield.
John D Mac Rae, Fayetteville.
Chas L Scott, Mebane.
Walter C Lauderdale, Asheville.
D G McKethan, Fayetteville.
G M Van Poole, Craven.
J F Peavy, Asheville.
Thomas Stringfield, Waynesville.
J Warren Achorn, Boston, Mass.
W E Miller, Burlington.
Harris R Moore, Burlington.
A M Whisnant, Caroline.
R Hicks, Henrietta,
W H Smith, Olive Branch,
W O Nisbet, Waxhaw.
J H Russell, Canton.
Wm Fountain, Leggett.
T L Brooks, Black Creek.
R T S Steele, Rockingham.
L H Love, Wilmington.
J P Whitehead, Rocky Mount.
S H Lyle, Franklin.
Chas Van Bergen, Asheville.
J H Woodcock, Asheville.
J B Matthews, Pittsboro.
J F Abel, Canton.
Chas S Jordan, Asheville.
Chas L Pearson, Asheville.
A M Bennett, Bryson City.

Earle Grady, Tryon.
Jas Sawyer, Asheville.
H C Menzies, Hickory.
L B McBrayer, Asheville.
John W Osborne, Asheville.
D E Sevier, Asheville.
J T Sevier, Asheville.
E R Morris, Asheville.
A S Pendleton, Warrenton.
S L Russell, Spillman.
W C Daniel. Adoniram.
C A Anderson, Burlington.
J A Morris, Wilton.
Thos P Cheesborough, Asheville.
B Ray Browning, Littleton.
J E Moore, Sandy Mush.
J E Smithwick, Jamesville.
R L Allen, Waynesville.
F G Wilson, Gastonia.
B R Graham, Wallace.
G P Reid, Old Fort.
J M Newbern, Powell's Point.
H McK Tucker, Raleigh.
D A Garrison, Bessemer City.
R F Yarborough, Louisburg.
Thomas W Davis, Louisburg.

H M Fletcher,
H A Royster,
C M Poole,
} Com.

Board of North Carolina Medical Examiners.

DR. D. T. TAYLOE, PRESIDENT AND EXAMINER ON SURGERY, Washington, N. C.

1. What are the symptoms and treatment of a fracture of the neck of femur within the capsule?
2. What is the treatment of each of the varieties of dislocation of hip-joint?
3. Describe, in a general way, the principal methods of amputation.
4. Give the causes and treatment of acute intestinal obstruction.
5. Give the differential diagnosis between scirrhus and non-malignant breast tumors.
6. Describe herniotomy.
7. What is the difference between traumatic inflammatory fever, septicæmia and pyæmia?
8. What is shock, its course and treatment?
9. In what regions must abscess be opened before fluctuation is detected?
10. What is the differential diagnosis between concussion and compression of the brain? And what are the indications for trephining?

Questions on Practice of Medicine.

BY W. H. H. COBB, M. D., Goldsboro, N. C.

Define Acute Ileo-Colitis, giving Dietetic and Medicinal treatment?
Give Diagnosis and Treatment of Typhoid Fever?
Define Pneumonia and give treatment?
Give Symptoms and Treatment of Insolation?
Define Hodgkin's Disease, giving Morbid Anatomy and Symptons?
Give Causes, Symptoms and Treatment of Acute Bright's Disease?
Define Neurasthenia, giving Etiology and Symptoms?
What is Asphyxia? How is it produced? What are causes of death from Asphyxia?
Define Remittent Fever, giving Treatment?
Give periods of Incubation, dates of Eruption and length of danger of Contagion of the five Eruptive Fevers?

Materia Medica.

By DR. E. C. REGISTER, Charlotte, N. C.

1. What are the preparations and doses of arsenic?
2. Name the alkaloids of opium and their doses.
3. What are the medicinal uses of nitrate of silver?
4. Name the two principal cardiac sedatives and compare them physiologically.
5. What substances are incompatible with the mercurial preparations?
6. What are the contra-indications for the use of an anæsthetic?
7. Name and describe the potassium salts that act as cathartics.
8. What is the difference in the action on the heart between alcohol, digitalis, and strychnine?
9. What is the difference between tetanus, picrotoxin and strychnine spasms?
10. What are the two principal conditions with which acute alcoholism may be confounded? Give the differential diagnosis of each.

Examinations by Albert Anderson, Wilson, N. C.

GYNECOLOGY.

1. Describe some of the methods of making a physical diagnosis.
2. Name the varieties of vaginitis; complications, symptoms and treatment.
3. Classify endometritis; give causes, symptoms, complications and treatment.
4. Classify uterine displacements and give etiology.
5. Give principal disorders and treatment of menstruation.

OBSTETRICS.

1. Describe the process of fecundation and give brief description of the elements entering into it.
2. Signs of pregnancy.

3. Give diameters, planes and axes of pelvis.
4. Define puerperal fever and give its causes and treatment.
5. Give variety of forceps, their action and indications for their use.

PEDIATRICS.

1. Give difference between the clinical investigation of diseases in children and adults.
2. Give a short outline of the general management of children as to feeding, bathing sleep, clothing and exercise.
3. Define and describe these terms: Caput Succedaneum; Cephalhæmatoma; Asphyxia; Icterus Neonatorum; Ophthalmia Neonatorum.
4. Give the order and age of dentition.
5. Give differential diagnosis between varicella and variola.
6. Give diagnosis and treatment of diphtheria.

Examination in Anatomy.

DR. J. HOWELL WAY, Waynesville, N. C.

1. Describe the superior extremity of the ulna.
2. Describe the knee joint.
3. Name the muscles which pass from the scapula to the upper limb and describe the deltoid.
4. Describe the cœliac axis and its branches.
5. Describe the cephalic vein.
6. Describe the fourth ventricle of the brain.
7. Give the course and distribution of the posterior cord of the brachial plexus.
8. Locate the heart and describe its arterial ventricle.
9. Describe the popliteal space, naming structures contained therein and their relations.
10. Locate the right kidney and give its relations.

Chemistry.

DR. K. P. BATTLE, JR., Raleigh, N. C.

1. Give the characteristic differences between an acid and an alkali.
2. Describe chlorine; give its physical properties and its chemical action.
3. How would you test for sugar in the urine?
4. How would you detect an excess of carbonic acid in the air?
5. Describe the phenomena of electrolysis.
6. Describe nitrogen, naming its oxygen compounds and its relation to atmospheric air.
7. What are the physical and chemical properties of phosphorus?
8. What is the difference between chemical union and mechanical mixture?
9. Explain what is meant when drugs are said to be chemically incompatible.
10. Give a test for the purity of chloroform.

Examination in Physiology.

THOS. E. ANDERSON, M. D., Statesville, N. C.

I. Define Proteids; how and where digested? Define Amyloid foods; name agents employed in their digestion.
II. Explain the physiological circuit essential to a reflex action, and cite an instance.
III. Differentiate voluntary and involuntary muscles; illustrate.
IV. Explain Amœboid movement; in what organism exhibited?
(a) What is Diapedesis?
(b) What is Phagocytosis? and to what organ accredited?
V. In what glands of the body is function undetermined?
VI. What is the function of the Par Vagum?
VII. In the function of vision, what is understood by "accommodation?" Name structures employed.
VIII. Give in cubic inches of air the respiratory capacity of a healthy adult.
IX. From what part of the Cortex Cerebri do the leg, arm and face receive their motor impulses.
X. Describe the circulation of the blood in the infant just before and just after birth.

A JOURNAL ON TUBERCULOSIS.

The literature on Tuberculosis is becoming very voluminous and hard to keep up with, as it is scattered throughout the various journals and publications along with other subjects. Every physician has perhaps felt the need of a journal devoted especially to this important part of medicine. "The Journal of Tuberculosis," edited by Dr. Carl Von Ruck, of Asheville, N. C., will supply this need. It is a quarterly magazine devoted to the prevention and cure of Tuberculosis. The April number is now out and promises great things for this particular subject. The editorial matter on "Immunity in Tuberculosis," and "Tuberculosis Diagnosis," is written by one who understands his business and contains all that is new and up to date on this subject. The original articles are by such well known men as Denison, of Denver, Taylor, of St. Paul, Williams and Chapman, of Asheville.

A department is devoted to the review of current literature. A twenty page supplement is added to the Journal which will contain a continued series of articles, written by Dr. Von Ruck. Articles already in print will be revised and republished,

and others will be written new, appearing in the following order :

1. The cause of Tuberculosis and the conditions which predispose to its acquirement.
2. The Prevention of Tuberculosis.
3. The clinical course of Pulmonory Tuberculosis with reference to its pathology and complications.
4. The Diagnosis of Pulmonary Tuberculosis.
5. The progress of Pulmonary Tuberculosis.
6. The treatment of Tuberculosis, dietetic, hygienic, and symptomatic.
7. The Climatic treatment.
8. The Specific Treatment.
9. Laryngeal Tuberculosis, its diagnosis and treatment.
10. Institutions for the treatment of Pulmonary Tuberculosis.

The subscription price is only $1.00 per year and is certainly to be recommended to every physician interested in this very important subject. It is published by A. H. McQuilkin, 95 College Street, Asheville, N. C., in a very neat and creditable manner.

DR. PICOT'S PRESIDENTIAL ADDRESS AT ASHEVILLE.

The eminently practical character of the addresses of the Presidents for several years past was continued in the message for 1899.

Dr. Picot took up the relation of the Tri-State and Seaboard Medical Associations to the State Society, taking the position that these societies were hurtful to the best interests of the State Society. Such position is hardly tenable, taking into consideration all the facts in the case. The policy of this Journal is most favorable to the maintenance and growth of the Tri-State Society for many reasons. The Medical Society of the State can only claim one-third of the regular practitioners among her members, leaving at least 1,000 physicians who should be members. This field is wide and broad enough for both Societies.

The Tri-State will only meet in North Carolina once in three years, and its meetings can not interfere with our attendance. Success has attended the organization of Tri-State Societies in other parts of the country, as they serve to develop and deepen the pride and interest in the different State associations. Who will show that our State Society is hurtful to our local and county societies, is it not rather the inspiration and help they need? So that the Tri-State organization, instead of proving hurtful to our society, will actually prove of benefit. Notice who among our members belong to the Tri-State—are they the disgruntled, the careless, the indifferent? Rather the very back-bone and main stay, the leaders themselves. Witness such men as W. H. H. Cobb, J. A. Burroughs, J. W. Long, G. W. Long. We feel sure that these men will not lead us wrong. In fact the majority of our best men are either active members of, or in cordial sympathy with, the Tri-State Society.

The suggestion concerning insurance among the members is a good one, and it is to be hoped that the committee will have a full and favorable report to make concerning it at the next annual meeting. A little ready cash would be very welcome in the doctor's family, as he too often leaves them only a large bundle of poor accounts. The recommendation in regard to the establishment of sections on Pediatrics and Railway Surgery was promptly taken up and adopted,the incoming president appointing chairmen for each of these sections.

Taken all together the message was exceedingly good, showing in many ways the interest, love and sympathy of Dr. Picot for the Society, in fact, such a deliverance as we would expect from a man of his ability, and from one who has been foremost in every good work of the Society for many years.

MALTINE WITH CREOSOTE.

The value of creosote, in the treatment of diarrhœa, either from septic condition of the alimentary canal as in turberculosis or from digestive disorders common at this season of the year, is recognized by all. The progressive Maltine Company of New York, have introduced upon the market this new and up to date preparation *maltine with creosote*

The maltine which is a very nutritious element, serves to disguise the taste of the creosote and removes its tendency to irritate the stomach.

The cresote in this preparation is absolutely pure, which is the only proper kind to be used under all circumstances.

Maltine with creosote contains four minims of creosote to the ounce and the dose can be regulated to a nicety.

The reputation of the Maltine Company as the makers of first-class scientific medicines, has been enhanced by the introduction of this new preparation.

Dr. J. R. Reitzel has removed from Woodleaf to High Point, N. C., for the practice of his profession. We wish him success in his new field.

NEW LAWS IN REGARD TO WATER SUPPLIES.

The State Board of Health of North Carolina, is pushing forward its work in the interest of the public health. The following act was passed by the last Assembly:

AN ACT TO PROTECT WATER SUPPLIES.

The General Assembly of North Carolina do enact:

SECTION 1. In the interest of the public health every person or company selling water to the public for drinking and household purposes shall take every reasonable precaution to protect from contamination and assure the healthfulness of such water; and any provisions in any charters heretofore granted to such persons or companies in conflict with the provisions of this act are hereby repealed.

SEC. 2. Those water companies deriving their supply from lakes or ponds or from small streams not more than fifteen miles in lengh shall have a sanitary inspection of the entire watershed not less, under any circumstances, than once in every three calandar months, and a sanitary inspection of any particular locality on said watershed at least once in each calendar month, whenever in the opinion of the board of health of the city or town to which the water is snpplied, or when there is no such local board of health in the opinion of the county superintendent of health or in the opinion of the state board of health, there is reason to apprehend the infection of the water by that particular locality. Said companies shall have made a sanitary inspection of any particular locality on said watershed at least once in each week whenever in the opinion of the board of health of the city or town to which the water is supplied, or when there is no such local board of health in the opinion of the county superintendent of health, or in the opinion of the state board of health, there is special reason to appehend the infection of the water from that particular locality by the germs of typhoid fever or cholera.

The inspection of the entire watershed as herein provided for shall include a particular examination of the premises of every inhabited house on the watershed, and in passing from house to house a general inspection for dead bodies of animals or accumulations of filth. It is not intended that the phrase "entire watershed" shall include uninhabited fields and wooded tracts that are free from suspicion.

The inspection shall be made by an employee of and at the expense of the said water company in accordance with reasonable instruction as to method to be furnished by the secretary of the state board of health. The said sanitary inspector shall give in person to the head of each household on said watershed, or in his absence to some member of said household, the necessary directions for the proper sanitary care of his premises. It shall further be the duty of said inspector to deliver to each family residing on the watershed such literature on pertinent sanitary subjects as may be supplied him by the municipal health officer or by the secretary of the state board of health.

SEC. 3. In case of those companies obtaining their supply of water from rivers or large creeks having a minimum flow of ten million gallons the provisions of section two be applied to the fifteen miles of watershed draining into the said river or creek next above the intake of the water works.

SEC. 4. Failure on the part of any water company to comply with the requirements of sections two and three shall be punished by a deduction from any charges against the city or town supplied of twenty-five dollars for each and every failure: *Provided*, that in no one year shall the sum of such forfeitures exceed five hundred dollars. When the water works are owned and operated by the city or town, failure on the part of the municipal officials, having in charge the management of the water works to comply as above shall be a misdemeanor and punished by a fine of not less than ten nor more than twenty-five dollars or by imprisonment for not less than ten nor more than thirty days: *Provided*, the said official do not prove to the satisfaction of the court that in spite of reasonable effort and diligence on his part he was prevented directly or indirectly by his superiors from doing his duty in this repect, in which case said superior officer or officers shall be deemed guilty of a misdemeanor and punishable by a fine of not less than fifty nor more than two hundred dollars or by imprisonment for not less than one nor more than six months.

SEC. 5. Every city or town having a public water supply shall, at its own expense, have made at least once in every three months by one of its own officials a sanitary inspection of the entire watershed of its water supply, and it shall be the duty of the said official making such inspection to report to the mayor any violation of this act.

SEC. 6. Every water company, whether owned by private individuals or corporations or by the municipality, shall have made not less frequently than once in every three months at its owners expense, both a chemical and bacteriological examination

of its water drawn from a faucet used for drinking purposes, packed and shipped in accordance with the instructions to be furnished by the secretary of the state board of health: Provided, that when a supply is from artesian wells the analysis shall be made in the discretion of the secretary of the state board of health, but not oftener than once in each year at the expense of the water company.

Sec. 7. As a check and guarantee of the faithful performance of the requirements laid down in the preceding section of this act the state board of health shall make or have made by its authorized agents such inspections of the watersheds and such chemical and bacteriological examinations of the public water supplies of the state as may be deemed necessary to insure their purity. Should such inspection or examination show conditions dangerous to the public health the secretary of the state board of health shall notify the mayor, the municipal health officer and the superintendent or manager of the water works at fault and demand the immediate removal of said dangerous conditions. If at the end of thirty days after service of said notice and demand the said dangerous conditions have not been removed to the extent that due diligence could accomplish such removal, the said secretary shall printed in one or more of the local newspapers a plain statement of the facts for the information and protection of the citizens using the water.

Sec. 8 Each sanitary inspector herein provided for is hereby authorized and empowered to enter upon any premises and into any building upon his respective watershed for the purpose of making the inspection herein required.

Sec. 9. This act shall be in force from and after its ratification.

Ratified the 8th day of March, A. D. 1899

Annual Report of the Secretary of the North Carolina Board of Health, 1898-1899.

R. H. Lewis, M. D., Raleigh, N. C.

The Seventh Biennial Report of the Board to the General Assembly through the Governor, which gives a complete statement of its work for the two years ending December 31, 1898, includes that done between the time of our last meeting and that date. The report has been published, and as it will be sent to any one requesting it, it would be a work of supererogation to repeat it here. Suffice it to say that our principal work since we last met is included in: An official examination by Col. A. W. Shaffer, the engineer of the Board, of the water sheds and works of the public water supplies of the State, including both chemical and bacteriological examinations of the same; an examination of the water supply of the State Hospital at Morganton, and of certain wells suspected of causing typhoid fever at Williardsville and at North Wilkesboro, infection with intestinal bacilli being found at both places; sanitary inspections of the State Hospital, a particular study being made of a small outbreak of typhoid fever there, the conclusion reached being that it was caused by an infection of a part of the milk supply; a sanitary inspection of the School for the Deaf and Dumb at Morganton, of the North Carolina College of Agriculture and the Mechanic Arts at Raleigh, and of the State prison; an investigation, by request of the Superintendent of Health of Alamance county of the conditions at Swepsonville, in the hope of ascertaining the cause of the very unusual outbreak there of malarial diseases; a health conference with the people of Winston-Salem.

Smallpox.—Since the period covered by the Biennial Report, the work of the Board outside the regular routine work of the secretary has been practically confined to work in relation to the legislation and to the management in an advisory way of the epidemic of smallpox which has been prevailing throughout the State. Although a part of this has been covered by the Biennial Report, it would doubtless be more satisfactory to consider the matter as a whole and report the epidemic from the first case to May 1, 1899.

SMALLPOX IN NORTH CAROLINA

The first case occurred in Wilmington on January 12, 1898 in the person of a negro train hand on the Atlantic Coast Line, whose run was into South Carolina, inwhichState the disease was prevailing—warning of which was given in the Bulletin for December, 1897. Prior to May, '98, it showed itself in Charlotte, 5 cases, 2 deaths, all colored, origin South Carolina; in Salisbury, 1 case, colored mail agent running between that point and Knoxville, origin Tennessee; in Buncombe, 2 cases, colored, origin South Carolina; Alamance, 2 cases, colored, origin Alabama; Clay, 10 cases, white, origin Georgia. Since May 1st the disease has occurred in all the counties named except Clay, and in 32 other counties, making in all 38 counties that have been visited by it, the infection in most outbreaks coming from Norfolk, Va., and

vicinity. The official reports for the month of April show smallpox still present in the following counties: Anson, 2; Bertie, 1; Chatham, 2; Chowan, 15; Currituck, 1; Gates, several; Hertford, 2; Iredell, 1; Martin, 3; Mecklenburg, 2; Moore, 4; Nash, 7; Union, 8; Wake, 43—14 counties. While new outbreaks have been reported since May 1st, '99, (5, Catawba (Hickory), Edgecombe (Rocky Mount (Gates, Rockham (Mayodan), Burke (Morganton), the last name is the only one which does not appear in tabulated statement given below. There have been so far 14 cases in Morganton, with two deaths among the whites. The reporter did not separate the races.

The total number of cases from the introduction of the disease into the State on Jan. 12, 1898, to May 1st, when the reports closed, was 616, with 17 deaths. or 2.76%. Of this number 182 were whites with 8 deaths, 4.93%, and 454 colored with 9 deaths, or 1.97%. This death rate is somewhat larger than appears to have been the case in some other States whose records can be depended on—Ohio, for instance, where of 770 cases, only 7 died, or less than 1 per cent. Indeed our smallpox death rate has been quite respectable in view of the fact that many wiseacres have persisted in asserting that the disease was not smallpox but "chickenpox," Cuban itch," "elephant itch, etc." But still the mortality was very low and that very fact increased the difficulty of managing the outbreaks, by rendering the people more indifferent to the importance of vaccination. Formerly when asked my opinion as to the best method of getting the people vaccinated, I would say, "A case of smallpox." Now I would say a number of cases with several deaths.

In view of the rapid spread of the disease during the latter part of February it was thought advisable by the President of the Board to investigate the matter by a personal inspection of some of the infected districts on the part of a committee from the Board. This inspection of several of the Eastern counties was made by himself and Dr. O'Hagan and the conditions were found to be such that he called a meeting of the Board at Raleigh on March 5th to consider them. At this meeting the report of the committee was received and the situation fully discussed, the unanimous conclusion being that the time had arrived for calling upon the Governor for authority to expend a part of the emergency fund appropriated in section 29 of the act in relation to the Board of Health. In pursuance of this decision the members of the Board present waited upon his Excellency and laid the facts before him. He showed his intelligent appreciation of the situation by promptly giving the authority desired. Reassembling, it was decided to employ a competent physician who should, under the title of Smallpox Inspector, visit infected points, decide doubtful diagnosis, interview local health officers, explain to the county and municipal authorities the gravity of the situation and the best way of meeting it, and impress upon the people the overwhelming importance of vaccination, Dr. Henry F. Long, of Statesville, Superintendent of Health of Iredell, in view of his intelligent management of a considerable outbreak of smallpox in his own county, was selected for the place. The results have shown the wisdom of the action of the Board and of their selection, as the unanimous testimony from the points he has visited has been that his presence and advice have been of great assistance. I am satisfied that the State never spent the same amount of money to better advantage than the $395.75 spent in this cause from March 13th to May 1st.

Owing to the blessed fact that epidemics of infectious diseases of any magnitude have been extremely rare in our state our people are unaccustomed to the restraints and duties incident to the proper management of them according to the principles of modern hygiene and this fact combined with the mildness of the disease engendering indifference to its dangers—such indifference in some instances, at first, before the public were generally awakened to the fact that genuine small-pox was among us, that the patient not feeling sick much would not call in a physician,—increased the difficulties of management. The exposures resulting from this were necessarily very numerous and why so many unvaccinated persons escaped, as they unquestionably did, is a mystery. But strange as it may seem the greatest trouble has come from our own profession. In some instances it arose from inexperience with the disease and the consequent failure to make promptly the correct diagnosis and report the case to the health officers. This was perhaps in some instances excusable, althoguh it must be said that a knowledge of the elementary principles of sanitary rules or a regard for them would have insured the taking of the proper precautions. This, however was a small matter compared to obstructions to the proper control of the disease which arose in another way, caused probably by unfortunate factional disagreements in the profession in certain communities—very few I am glad to say. I refer to the denial of the correctness of the diagnosis of smallpox by some physi-

cians, thereby furnishing a centre for the intractable members of the community to rally around,and rendering the enforcement of the necessary regulations very much more difficult. Where the dissenting physician saw the case or cases in person it was doubtless an honest difference of opinion, but usually he refused to visit the patient, while he continued to publicly express his opinions. With the lights before me I can see no sufficient justification for this attitude on the part of a medical man. In the matter of disease the physician occupies with the people a position of authority and as a patriotic citizen, to say nothing of his professional obligations, the abuse of that high position, from whatever motive, in a way calculated to increase the misfortunes of his neighbors is to express it in the mildest possible terms,extremely indiscreet. In every instance where the profession was united no trouble was experienced, the authorities both country and municipal responding promptly to their suggestions.

In addition to directing the movements of the Inspector I have written a great many letters to superitendents of health, mayors, county commissioners, and others, and have prepared two circulars—the first in July 1898, which was sent with a letter to the editors of the newspapers of the State for publication, and the second, in March 1899, which was printed in the form of a poster, a copy of which is attached, which was sent to the superintendents of health with a letter requesting them to post in conspicuous places.

On the whole when we take into consideration the conditions already alluded to, and, in addition, the imperfections in our sanitary machinery, I think there is good ground for congratulating ourselves and the state that the various outbreaks have been generally so well managed and that so many of the people have been vaccinated. While there has been a good deal of opposition to vaccination it is gratifying to know that several enterprising communities with officials of nerve carried it out under compulsion, going so far in more than one instance as to commit the recalcitrant to jail, or to work upon the roads, until a more enlightened frame of mind was reached. This is fortunate, for the seeds having been widely distributed there is reason to fear a recrudescence of the disease next winter and probably in a severer form.

The following is a tabulated statement of smallpox in the State from January 12th, 1898, to May 1st, 1899, when the last official report was received.

TABULATED STATEMENT.

RECORD OF SMALLPOX IN NORTH CAROLINA FROM JANUARY 12, 1898, TO MAY 1, 1899.

COUNTIES.	CASES. W.	C.	T'L	DEATHS W.	C.	T'L
Alamance	20	2	22	1	....	1
Anson	....	5	5	....	....	....
Beaufort	....	2	2	....	....	....
Bertie	....	12	12	....	1	1
Buncombe	....	11	11	....	1	1
Catawba	....	13	13	....	....	....
Chatham	1	18	19	....	....	....
Chowan	....	21	21	....	1	1
Clay	10	....	10	....	....	....
Columbus	2	2	4	....	....	....
Craven	....	2	2	....	....	....
Currituck	10	30	40	....	....	....
Durham	....	8	8	1	....	1
Edgecombe	43	13	56	....	....	....
Gates	4	30	34	....	....	....
Guilford	3	....	3	....	....	....
Halifax	....	9	9	....	....	....
Hertford	1	2	3	....	....	....
Iredell	16	57	73	....	....	....
Johnston	....	1	1	....	....	....
Lenoir	1	16	17	6	....	6
McDowell	14	....	14	....	....	....
Martin	....	3	3	....	....	....
Mecklenburg	1	7	8	....	3	3
Moore	....	6	6	....	....	....
Nash	....	14	14	....	....	....
New Hanover	3	3	6	....	....	....
Northampton	....	9	9	....	....	....
Pasquotank	14	35	49	....	1	1
Perquimans	1	....	1	....	....	....
Rockingham	....	1	1	....	....	....
Rowan	2	23	25	....	....	....
Tyrrell	4	....	4	....	....	....
Union	....	8	8	....	....	....
Wake	5	64	69	....	1	1
Warren	3	1	4	....	....	....
Wayne	3	24	27	....	1	1
Wilson	1	2	3	....	....	....
Total No. cases	162	454	616	8	9	17
Death rate per cent				4.93	1.97	2.76

Total number of counties 38.

LEGISLATION.

In the early part of the session of the recent Legislature I sent a circular letter to all superintendents of health asking for any suggestions they might have to make as to the amendment of our health law. Many did not reply at all and most of those who did had no amendment to suggest. Among those expressing an opinion one or two favored an increase in the powers of the Board for which public sentiment was not yet ready, but most confined themselves to the method of electing the county superintendent of health. They were about equally divided between retaining the present plan of election by the county commissioners and returning to the old plan of election by the county board of health. After very

careful consideration of the matter I finally settled upon a compromisse method which, in short, constituted a new county board of health, to be composed of not more than three registered physicians, the county commissioners, and the mayor of the county town, which board would elect the superintendent and fix his salary. This was regarded by those with whom I discussed it as a good solution of the difficulty, but knowing from experience how dangerous a discussion of any technical bill was with no one on the floor thoroughly understanding it, I decided, after advising with some judicious friends, that the gain to be obtained was not sufficient to justify the risk, and abandoned it. I did, however, after a good deal of tribulation, succeed in securing the enactment of "An Act to Protect Water Supplies," which is an advance on the line of sanitary progress in the State. This matter is fully set forth in an editorial prepared for the May bulletin which is now in press.

But the most important legislation bearing on the public health for many years was the amendment of the medical license laws so as to require of all applicants for license a diploma from a medical college in good standing requiring an attendance of not less than three years, and furnishing such facilities for clinical instruction as should meet the approval of the Board of Medical Examiners. It is unnecessary to say that nothing is so important to the preservation of the public health in a community as the thorough and practical education of its physicians. Acting formally in another capacity, as chairman of the Committee on Legislation of the State Medical Society, I had the honor of assisting in securing the enactment of the amendments. As the medical license laws, as amended, were printed in full in the April number of the Bulletin, it is unnecessary to discuss this matter further, other than to congratulate the Board and the Society on now having the best medical license law in the country.

The annual health conference was held in Winston-Salem on December 7th, 1898. I thoroughly advertised it through the local newspapers, which were very kind in doing it, and by means of a circular letter giving the programme, distributed in advance, but the attendance for a town of that size was a disappointment to us—caused in part, let us hope, by the uncomfortable climatic conditions prevailing at the time.

As per appointment I attended the National Conference of State and Provincial Boards of Health of North America for 1898 at Detroit in August last, and that for 1899 at Richmond the 23d and 24th of this month. These meetings composed entirely of practical health officers and members of boards of health have been of value to your Secretary in reviving his interest, stimulating his zeal, and in broadening his views. They afford an excellent opportunity in private conversations and in public discussions to compare the work and methods of the different boards, and in conclusion I wish to say, as the result of such a comparison, that, especially in view of the tremendous inertia on the part of the people—and largely of the profession too, I regret to admit—and considering our meagre appropriation, we have no reason to be ashamed of our work—unsatisfactory as it is. But the people have been awakened as never before in my experience by the smallpox epidemic, and I hope that it is the beginning of better things.

A NEW JOURNAL.

The first number of the "Jeffersonian," a medical journal published by the under graduates of the Jefferson Medical College of Philadelphia, has been received. The new journal will be run in the interest of the college, and it can hardly hope to be worth much for the dissemination of real scientific literature. Journals published in the interest of drug houses, hospitals, sanitariums or colleges all belong to the same class and it cannot be said that they constitute any real addition to our means of growth and development. To the alumni of this famous school, the local news will be of some interest, but the deficiency as a medical journal is very apparent.

The Journal of the American Medical Association for June 3rd is a credit to medical journalism in this country. It is a souvenir number of the 50th Annual meeting of the American Medical Association, held in Columbus, Ohio, June 6–9, 1899. The cover has excellent cuts of ten of the living ex-Presidents. Among them we notice the familiar face of Dr. Hunter McGuire. The reading matter is interesting as history of the Association and as showing the progress of the different departments of medicine in the past 50 years. Progress in Surgery is written by R. W. Matas, in Medicine by Musser, Gynecology, by Charles A. L. Reed, Obstetrics by Frank A Stahl, Therapeutics by the Therapeutical Hare, Physiology by G. W. Stewart, Anatomy by Frank Baker, with several other well written departments.

This number of the Journal will be treasured by the members of the Association and by every physician who is really interested in his profsssion.

Terraline.

By Wm. L. Dickinson, M. D., Saginaw, Mich.

From the dawn of history civilized man has known of petroleum, and made use of it as a medicine. Petroleum was used many generations before boring was employed to obtain the oil, it then being obtained where it had forced its way to the surface of the ground. We use the word "petroleum" to designate those bitumenous formations of an oily consistence, that by insensible gradation on the one hand pass into the volatile and ethereal napthas, while on the other hand into the semi-fluid mathas or mineral tars. Herodotus wrote of the springs of Zacynthus, while the Arabs and Persians of the fountains of Hit.

Pliny and Dioscorides in their writings describe the oil of Agrigentum, which was used in lamps, under the name of "Sicilian oil." Mention is also made in the ancient records of China of its petroleum springs. Travelers from an early date who have gone overland from Europe to India have frequently mentioned the abundance of petroleum and the fire-temple at Baku on the Caspian.

A Franciscan missionary, Joseph de la Roche d'Allion, in a letter written in 1629, made metion of the petroleum found in North America, while Peter Kalm, of London, in 1772, published a book of his travels in North America, in which he described the springs on Oil Creek. In 1814 while wells were being bored for brine in Washington county, Ohio, petroleum was discovered and described.

In 1819 a well bored for brine in Wayne county, Ky., yielded so great a quantity of block petroleum that it was abandoned.

Near Burksville, Cumberland county, Ky., a well was drilled for brine in 1829, and it yielded such a flow of petroleum that it was regarded as a wonderful natural phenomenon. A few barrels only of the oil was bottled and sold as a liniment in the United States and Europe, under the name of "American oil."

Petroleum in its crude form was used for many years as an external application for rheumatism, and also taken internally as a remedy for consumption, but on account of its disagreeable odor and taste it never was a popular medicine. After a time a tasteless and odorless preparation under the name of Terraline was brought to the notice of physicians, and the good results looked for from its use have not been wanting.

Terraline is now used in consumption, chronic bronchitis, throat and all wasting diseases. Terraline, as has been stated, is a preparation of petroleum refined by distilled and otherwise purified, nearly colorless or translucent, odorless and tasteless, and free from acidity or alkalinity, and does not undergo decomposition or become rancid, unless the bottle is left uncorked and standing in a too warm room for a long time. Terraline has been largely used for internal administration as it possesses soothing and healing properties, especially grateful to the bronchial and gastro-intestinal mucus membranes.

There are many cases of consumption where Cod Liver Oil in any form can not be given on account of its taste and fishy smell, and in these cases Terraline can be given without any disturbance of the stomach. Children will take this purified form of petroleum without the least resistance. I have found that by giving the patient (an adult) from ten to twenty grains of guaiacol carbonate four times daily, and two teaspoonful of Terraline three times daily, combining this treatment with good hygenic surroundings, proper food, warm temperature, living out of doors as much as possible, cheerful and pleasant companions, and the inhalation of creosote liberated by steam atomization into the air of the sleeping room occupied by the patient, that the cough soon commences to stop, the expectoration becoming less, while the appetite improves, and the patient takes on flesh.

I here report two cases of consumption where the diagnosis was confirmed by the finding in the sputum of tubercle bacillus. Case 1. Mrs. X., aet. 25, Catarrhal phthisis, breaking down of lung tissue in the upper porterior portion of lobe of right lung. Temperature had been ranging from 100 to 101½ for a period of two months. There had been two slight and one quite severe hæmorrhages. There was also anorexia, loss of appetite, impaired digestion, and inability to sleep on account of the severe attacks of coughing. The expectoration was very profuse, and there was also night sweats. The loss in weight had been sixteen pounds. In two weeks time after taking Terraline in two teaspoonful doses and the Guaiacol Carbonate in two grain doses, each four times daily, the patient had gained three pounds in weight, the appetite was much better, cough less, expectoration much diminished, and gaining in every way. She continued to improve steadily and after eight months treatment, microscopical examination of the sputum did not reveal any tubercle bacillus, and she had regained her former weight, and considered herself as well and strong as ever.

Case 2 Mr. A., aet. 42. Greatly eman-

ciated, coughed almost constantly except when given morphine to control it. There was a cavity under left scapula. The expectoration amounted to about ten ounces in twenty-four hours. Afternoon temperature 101 to 102.

Gave Creasotal gtt. x in teaspoonful Terraline four times daily, and a capsule three times daily of Protonuclein gr. v., Quinine Sulph. grain 1.

In one month had gained four pounds in weight, while the cough and expectoration was much less. Patient continued to improve and in five months had ceased to cough and had regained his usual weight and an examination of the sputum showed it to be free of turbercle bacillus. The case I now report I do not class as a pronounced case of consumption, but I believe if it had been left alone it would have become such. Mr. A., aet. 35, had been gradually growing weaker for several months, had been having vague pains through the chest and upper apex of right lung, accompanied by a dry cough. Had lost in weight six pounds, and at time of examination had a temperature of 100½.

Physical examination showed some dullness of upper porterior portion of right lung. Patient had been trying to take cod liver oil in different forms, and on account of his repugnance to the oil, I prescribed Terraline in two teaspoonful doses, to be taken in half an ounce of Sherry wine immediately before meals, Syrup Hydriodic Acid teaspoonful in water half hour after meals. Two months of this treatment cleared his lung up, the temperature became normal, the cough stopped, and he gained in flesh until he weighed nine pounds more than his usual weight.

We can say in closing that the advantages of Terraline are its palatability, easy digestion, rapid assimilation, and its sedative effect upon the mucous membranes, and that it can be given in cases where cod liver oil cannot.

Ocular Evidence of Hysteria.

Dr. Casey Wood (Am. Journal Medical Sciences) makes the following statements:

Most cases of hysteria present well-marked, easily detected eye-signs and symptoms.

A few ocular symptoms, such as a reversal of the relation of the colorfields and the field for white, the tonic form of blepharospasm, spasm of accommodation and convergence, and pseudopapalytic, may be regarded as pathognomonic of hysteria.

Defects of vision (in the absence of refractive errors, accommodative anomalies, and fundus lesions) are, generally speaking, hysterical, if accompanied by photophobia and any form of plepharospasm.

No examination of a patient for hysteria should be regarded as complete without considering the condition of his ocular apparatus.

Where there is no conclusive external evidence of neurosis present the perimeter should be carefully used, the range of accommodation should be noted, and the ophthalmoscope employed.

It should always be remembered that ocular hysteria is common in children and men.

Organic disease (traumatism especially) of the eye may accompany functional disturbances of that organ.

The Treatment of Gall-stones.

W. L. Carr, [*New York Medical Journal* of April 22, 1899.] The predisposition to gout and rheumatic disorders is largely concerned in the production of gall-stones. The possibility of the bacterium coli commune being a cause of their formation is due to the fact that it produces a catarrhal condition of the intestinal tract. The treatment of biliary colic consists in relieving the pain by morphine and atrophine, to which large draughts of water may be added. The preventive treatment or the management during the intervals of hepatic colic are dietetic and drugs. For diet the strict elimination of all foods slow of digestion and those which are especially rich in fats and sugars. Chloroform, ether and turpentine, which have been held for many years as having power to dissolve gall-stones, have really little action in this direction. Sweet oil is a valuable adjunct, but in many cases the saponified masses of oil are mistaken for gall-stones. Among the drugs which are considered valuable in stimulating the flow of bile and increasing its solvent properties are salicylate of sodium, cholate of sodium, succinate of sodium, and the succinate of iron. Locally massage of the abdomen with gentle manipulation of the region of the gall-bladder. In impaction surgical means will alone afford relief.

Sanmetto in all Forms of Vesical Disease.

I have found the preparation known as Sanmetto a most excellent remedy in all forms of vesical diseases that have come under my observation, especially the cystitis attendant on the presence of stone before and after its removal, and also the vesical tenesmus from colds and urethral inflammation, both specific and non-specific.

Jno. R. Papin, M. D.

St. Louis, Mo.

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Large fan for winter and summer ventilation. Absolutely devoid of usual hospital odors. Delightful surroundings. Lakeside resort. Pleasure grounds, steamers, sailboats, etc. Trained nurses of either sex furnished at reasonable rates.

J. H. KELLOGG, M. D., Supt., Battle Creek, Mich.

℞ NUT-GLUTEN BISCUIT: Made from the purest wheat gluten and nut meal. The only food on the market to-day that diabetics may eat of freely, without danger. Prescribed and endorsed by the physicians of the Battle Creek Sanitarium. Samples free to physicians when card is enclosed with the request. Others may have them for two 2c stamps.

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A Laxative Salt of Lithia.

Prepared only for the Medical Profession.

INDICATIONS.—Gout and all of those diseases arising from a gouty condition of the system, rheumatism and all of those diseases arising from a general rheumatic condition, chronic constipation, hepatic torpor and obesity. In all cases where there is a pronounced leaning to corpulency, it reduces to a minimum the always present tendency to apoplexy. In malaria because of its wonderful action on the liver, increasing twofold the power of quinine.

Inasmuch as some difficulty is experienced by physicians in procuring Thialion, we will, on receipt of one dollar, send one bottle containing four ounces, sufficient for three weeks' treatment, prepaid to any address.

Literature on Application.

THE VASS CHEMICAL CO.,
DANBURY, CONN.

Cord. Ol. Morrhuae Comp. (Hagee).

A great desideratum in the medical practice is an ideal tissue builder. The busy practitioner frequently finds himself at a loss to decide upon the most efficient remedy for a given case, in spite of the great variety of drugs from which he may select. This is especially true in cases where tissue changes and waste are continuous and where it is necessary to check the disintegration and repair and restore the waste of cellular tissue, resulting from established cachexias. In these cases remedies are required both for their antidotal properties and their food values. Under these circumstances that remedy, which most nearly meets the requirements of the case, is of most value.

I am rarely constrained to lend my indorsement to any proprietary remedy, though admitting, in a general way, that many of them are excellent for the treatment of diseases which they are recommended. But I have found in the use of Cord. Ol. Morrhuæ Comp. (Hagee) such marked benefit, that I feel justified in calling the attention of the profession to its merits, both as a medicine and tissue builder. Its elegance and excellence as a pharmaceutical product, the ease with which it is assimilated, its retention by the most delicate stomachs, all make it desirable for exhibition in cases where the principal indication is to guard the patient's stomach. Used in anæmic conditions associated with chlorosis, when the catamenia are slow in asserting themselves or dysmenorrhea exists on account of a defficincy of red blood corpuscles, or in cases of menorrhagia requiring the use of a tonic. I have secured excellent results, and have seen patients rapidly relieved of untoward symptoms, while in debilitated conditions following typhoid fever, when convalescence is slow, the effects of the remedy are all that can be desired. During convalence from pneumonia, when resolution is slow and the normal respiratory murmur is not rapidly established, I know of no better remedy. I have used it satisfactorily with children, recovering from summer diarrhœa, in connection with milk or some of the most desirable baby foods upon the market.

In the primary stages of phthisis pulmonalis, I have confidence in its curative powers, while it has proved of advantage in my hands in all stages of the disease. It is particularly in these cases where the stomach becomes so rebelious and so intolerant of medication, that I could cite many cases in which I have used the Cordial, but will only subjoin one for the consideration of the profession.

M. H., female, white, age 16, American, tall, slim, slightly cachectic, poorly developed, general health below normal, suffers from amenorrhea, has some cough, mammary glands undeveloped, pulse 90, elevation of temperature 1-2 degree above normal, no expectoration with cough, no sinking of tissues above clavicle, slight dullness on percussion in apices of both lungs, auscultation reveals dry rales of both lungs, slight hoarseness. History shows menses appeared at fourteen and were regular for three or four months, though scanty and painful, then ceased and had not reappeared up to present date. Prescribed Cord. Ol. Morrhuæ Com. (Hagee), teaspoonful 4 times per day, tinct. ferri cholorid, 10 drops 3 times per day, and occasional hot hip baths. The menstrual flow was re-established in two months and recovery was rapid and uneventful. At this time the patient is in excellent health and has had no tendency to relapse to her former condition.

N. M. Baskett, M. D.,
Moberly, Mo.

Defective Elimination.

Defective elimination is without doubt the cause of a large number of diseases.

Usually when the kidneys fail to do their work the skin comes to the rescue and vice versa. Occasionally when both are derelict the bowels may help, but to a small extent only. Again, all the excretory organs may be ready, able and willing to perform their functions, but there is an emunctory at fault, which has become gorged and fails to carry to the "main" that waste product over which it exercises particular care, causing an interruption of metabolism. As a result there is an attack of a rheumatic or neuralgic character.

Tongaline, on account of its extraordinary eliminative properties, especially when administered with copious draughts of pure water, hot preferred, flushes the emunctories, thoroughly removes the obstructions and promptly restores normal conditions.

Chemical Food is a mixture of Phosphoric Acid and Phosphates, the value of which Physicians seem to have lost sight of to some extent, in the past few years. The Robinson-Pettet Co., to whose advertisement (on page 14) we refer our readers, have placed upon the market a much improved form of this compound, "Robinson's Phosphoric Elixir." Its superiority consists in its uniform composition and high degree of palatability.

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CREOSOTE.

A number of years ago, when the value of Creosote became fully demonstrated, we began the publication of a formula for the administration of Creosote in Maltine. This formula has been employed successfully by thousands of physicians, and we have been urged over and over again to place such a combination upon the market in order that a uniform and properly prepared product could be had under all circumstances.

"MALTINE with CREOSOTE"

is the most eligible and palatable form in which Creosote can be administered. The vehicle—Maltine Plain—is particularly indicated, by reason of its great food and digestive value, in all conditions in which Creosote is so universally employed.

It will give us pleasure to send, prepaid, samples of

"MALTINE with CREOSOTE"

to any physician in good standing who wishes to satisfy himself of its therapeutic value and elegance.

THE MALTINE COMPANY,

Eighth Ave., 18th and 19th Sts., BROOKLYN, N. Y.

The Treatment of Carbuncles.*

There is no affection falling to the lot of human suffering that is attended with more pain and suffering than carbuncles. Besides the pain which they carry in their train, they are attended with much danger. As a cause of death, upon investigation, we will find that the mortality incident upon this affection is by no means contemptible. In this article I shall not deal with the symptoms or pathology of this affection, that being easily obtained by reference to the standard text-books on surgery.

One of the first considerations in the treatment of a patient with carbuncles is to see that he is well and thoroughly nourished. The importance of this is very manifest when we reflect how much debility is associated with the unfolding of a carbuncle. We should give regularly food of a nourishing character, and we must be satisfied that our patient gets enough to sustain his strength. Liquid diet and easily digested solid foods are to be given as regularly as we do our drugs. Milk, predigested foods, and everything which offers no resistance along the line of nourishment will be called into requisition by the wise physician. In this connection I must not omit to mention the value of stimulants in some cases. In patients who are extremely weak, either from the disease itself or from a poorly nourished state of the system existing before the supervention of the carbuncles, it is of the greatest importance to give some stimulant regularly. Whisky serves us well, but I generally allow the patient to select his own favorite liquor. I give stimulants often enough to keep the volume of the pulse good. There is no rule better than the one Jurgensen lays down; this, he says, "is the rule of consistency." He explains this by saying that stimulants should be given to produce the effect we desire. We must not stand on quantity or dosage, effect on the pulse is what we must obtain; if large doses are requisite and frequent dosage is necessary, we must bring both to bear.

The old writers on surgery and practice advocated the abstraction of blood and the employment of drastic purgatives. It is not worth serious argument to convince the practitioner of the present day that such practice tends to intensify all the serious factors in the case.

I shall now speak of the treatment of carbuncles by drugs and by surgical means. Let me consider the treatment under two heads: First, the internal treatment; second, the treatment by local applications and surgical procedures. By the internal remedies are meant not, of course, foods and stimulants as have already been mentioned, but pure medication to correct the blood dyscrasia which gave rise to the carbuncular conditions. Iodides and sulphide of calcium have been administered, but they are not now relied upon by the profession. Both of these agents have utterly failed to modify in any way the progress of a carbuncle, and they have been tried thoroughly. Iron has also been tried, and it, too, has failed, and is not now relied upon by the profession. For some months I have relied upon ecthol as an internal medicine. I have notes on fifteen cases treated with this agent. I employ it in doses of a teaspoonful every two hours. Its internal administration is the only drug which I can say has ever seemed to abbreviate the carbuncle. It is a corrector of blood dyscrasia, and in the best sense an anti-purulent. In this connection we may say that an anti-purulent is just what our therapeutics has lacked, and it is the first need of the practitioner when he has a carbuncle under his charge. Ordinarily I give no other internal remedy than ecthol. This remedy I continue until the patient has been discharged. But as improvement becomes marked and steadfast, I allow the interval between the doses to grow longer. First, he is given the remedy every two hours, then every four as he gets along substantially well. This given in doses of a teaspoonful acts very promptly in giving, as it were, a check to tissue disintegration. Of course, opiates are often called for to overcome the pain present, in in some cases to an almost insufferable extent. Papine is the best way to exhibit this agent, since it does not produce interference with the secretions as in the case with other opiates. I give it in doses of a teaspoonful every one or two hours until the patient has obtained relief from pain.

Coming now to the measures which should be employed locally and surgically, let me say that this part of the treatment is as important as the giving of internal remedies. During the time the inflammation is beginning and up to the time when there is sufficient pus in the pointing carbuncle to justify an incision, I employ flaxseed poultices. These soothe and hasten the formation of the pus. An incision is now made, and the pus all emptied; the cavity is scraped and all the dead inflamed tissue is removed. It is then carefully cleaned with peroxide of hydrogen. Then absorbent cotton saturated with ecthol is applied to the exposed and adjacent surfaces. This is to be reapplied every four or eight hours, as the case in hand seems to warrant. Each opening is to be treated in this manner, and

*Dr. M. P. Creel in Lancet Clinic.

A SIMPLE AND MOST EFFECTIVE

Treatment of Chronic Leg Ulcers

Thoroughly wash and irrigate the ulcer and adjacent parts; after drying apply **Antinosine** (pulv.), distributing the powder lightly over the entire surface. Over this place a nosophen-gauze dressing, the whole held in place by a roller bandage. In cases with hard infiltrated borders, precede the above treatment by curetting.

ANTINOSINE

(the sodium salt of tetraiodo-phenolphtalein) has been proven by extensive and most severe clinical tests to be beyond question the most efficient of all existing antiseptics in the treatment of ulcers and abscesses generally, infected wounds of any nature; very useful in palliative treatment of cancerous ulcerations, lupus, etc. ANTINOSINE is absolutely non-toxic, non-irritating and odorless. It is freely soluble in water, and in solutions of 1 to 2½ per cent. gives most excellent results in cystitis, as an injection in gonorrhœa, as an antiseptic fluid in ear, nose and throat practice, etc.

Literature on request.

Sole Agents for the U. S. and Canada:

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Salophen The Safest, Most Agreeable and Reliable Anti-rheumatic.

An Important Advance in Gonorrhœa Therapeutics. **Protargol**

Somatose A Scientific Food, Tonic and Restorative.

The Chalybeate Tonic and Nutrient. **Ferro-Somatose**

Lycetol The Uric Acid Solvent and Anti-arthritic.

Send for samples and literature to

FARBENFABRIKEN OF ELBERFELD CO., 40 Stone St., New York.

Selling agents for the Bayer Pharmaceutical Products:

Aristol, Creosote Carbonate (Creosotal), Europhen, Ferro-Somatose, Guaiacol Carbonate (Duotal), Hemicranin, Heroin, Iodothyrine, Lacto-Somatose, Losophan, Lycetol, Phenacetin, Piperazine-Bayer, Protargol, Quinalgen, Salicylic Acid, Salophen, Somatose, Sulfonal, Tannigen, Tannopine, Trional.

when we see a case of carbuncle with several centers ready to open we should remove as much of the diseased tissue as possible. Great freedom in the employment of the knife often greatly aids us in bringing about a speedy termination of the case in hand. It is the best thing we can do for our patients to lay the carbuncle open and remove all the diseased tissue, and treat the lesion then with ecthol locally. If we employ this agent as our internal remedy, and use it also as a local application, we shall find that our treatment will prove more effective than by methods employed formerly.

I have treated fifteen cases of carbuncles in the manner here outlined, and the duration in each case has been greatly shortened, and the patients naturally got up with less weakness than they otherwise would.

Before employing this agent, a carbuncle meant a long spell and death or long-continued convalesence. The average duration of my cases under this treatment has been ten days.

I now give a brief account of several cases treated by the method I have here advocated:

S. C. T., aged thirty-seven, a miner by occupation. He had been a sufferer from malarial fever for a month or so, but was able to work. He had a carbuncle about the size of the palm of the hand on the neck. There was a great deal of pain, and fever of 101 deg. F. was present. His carbuncle had five heads or points, and seemed to invite incision, they showing the presence of pus. This was thoroughly opened and the diseased tissue was removed as thoroughly as possible. Peroxide of hydrogen was used to clean out the diseased cavity well, and then absorbent cotton saturated with ecthol was applied constantly throughout the course of the disease. Ecthol in doses of a teaspoonful was given every two hours. This patient began to improve at once, and there was no retrogression. The carbuncle began to take on a healthy action, and this patient was discharged nine days later.

Mrs. B. K. Y., aged forty-seven, had a carbuncle on her face. This was attended with high fever and delirium. This carbuncle had three openings. It was treated as in the former case as regards the local and surgical means employed. Besides these she had to take predigested milk and considerable quantities of wine, so weak was she. She took ecthol internally also, in doses of a teaspoonful every two hours.

J. C. P., aged fifty-five, had a carbuncle on the nape of the neck. He had been a sufferer for years with asthma, and was in a low state of health. This patient I regarded as one who would give me serious trouble, and who would in all probability die. The carbuncle was freely opened and treated in the same way as the first case here recorded as regards the surgical and local measures. He was from the first given predigested foods and stimulants, and ecthol was the only internal medicine he received except some papine to relieve the pain. This man went along slowly, but he recovered fully, and was able to go about his work seventeen days from the time I first saw him.

These cases are selected because they are ones which would test the efficacy of a treatment.

In the warfare on microbes which of necessity forms so important a factor in modern surgery, too much care cannot be devoted to the ammunition. Pus must be removed or destroyed, its formation prevented. Alcohol, in certain strengths, is well known to be a very good germicide. Camphor and menthol also have their merits for this purpose. For some time a combination of these with hydrogen peroxide has been in use in the hospitals of Berlin, and has been found to be a superior antiseptic. The laboratory tests show marked results indicating that these solutions have a germicidal power exceeding what would be expected from the sum of the ingredients. Camphoroxol and Menthoxol, as these solutions have been called, not only are powerful germicides, but harmless as well. They do not irritate, they stimulate the growth of healthy granulations, and besides are very stable solutions which retain an undiminished activity for a very long time. Sterile gauze, wet with a ten per cent. solution, forms a neat and most efficacious dressing for any wound surface, and possesses the merit of being not only a powerful, but also a continuous antiseptic. As of minor importance, perhaps, it may be remarked that freely diluted with water they form a very pleasant, refreshing and efficient mouth wash.

There are men in the practice of medicine whose aversion to giving endorsements to pharmacists is so intense that only qualities far out of the common could induce them to utter a word of commendation. A single sentence from such a man is more significant than reams of eulogy from other sources. Of such a character is the following from a physician who enjoys probably the largest practice in Oakland, California. "I have used Angier's Petroleum Emulsion for many years, and have found it of great utility in the treatment of debility, especially in tuberculosis cases."

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Unguentum Resinol. *Antipruritic, Antiphlogistic, Nutrient and Pleratic.*

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Resinol Soap. *Prophylactic, Germicidal, Etc.*

I prescribe UNGUENTUM RESINOL daily with entire satisfaction.—D. F. MONASH, M. D., Lect. on Theory and Practice of Med., Iowa Col. of Phys. and Surgs., Des Moines, Iowa.

I have requested our druggists to carry UNGUENTUM RESINOL and RESINOL SOAP. They are all right.—A. E. EARLY, M. D., Kingman, Arizona.

RESINOL has given me entire satisfaction. Its wide range of usefulness especially recommends it.—LOUIS A. BOORING, M. D., Louisville, Ky.

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Have used RESINOL in many cases and am exceedingly pleased with its action.—G. E. WILDER, M. D., Sandusky, Ohio.

I cannot find anything that can take the place of RESINOL.—A. AGEE, M. D., Holbrook, Ky.

I have found RESINOL to be a remarkable cure for almost any type of Sore.—G. D. BOUDOUSQUIE, M.D. Tuscaloosa, Ala.

I have prescribed RESINOL in many cases and am very much pleased with it.—SAM'L G. SEWALL, M. D., 71 E. 121st St., New York.

I have prescribed UNGUENTUM RESINOL with great success in Eczema, Pruritis Ani and Pruritis Vulvæ.—WM. LAMBERT, M. D., Kansas City, Mo.

I am more than pleased with UNGUENTUM RESINOL.—C. B. WALRAD, M. D., Johnstown N. Y.

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A CLEAR AND POWERFUL STREAM.

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Local Anesthesia.

The International Journal of Surgery, comments as follows on this subject:

It is remarkable how unimportant a place local anesthesia still occupies in surgery. It is an indisputable fact that complete anesthesia is still, and will always remain, a matter of dread to patients; that surgeons do not make any very strenuous endeavors to avoid it when they could possibly do without it. The most profitable work for the surgeon is often connected with the painless treatment of common affections, such as piles, in people who would subject themselves to ordinary operative measures were it not for the fear of anesthesia. In chloride of ethyl and the subcutaneous employment of cocaine and eucaine we have means that are really not half studied out, and which deserve more careful consideration than they have yet obtained. The writer has operated for piles and fistula, has removed the breast and done a partial excision of the clavicle with Schleich's infiltration anesthesia and chloride of ethyl. The use of the latter prior to inserting the hypodermic needle is often of advantage, as its insertion, in cases of ingrowing nails and infected fingers is often almost as painful as the operation itself. The ophthalmologists are nearly the only ones who use local anesthesia to the full extent of its possibilities, and we expect to see practitioners of other branches of surgery, in the near future, more eager to extend the scope of local anesthesia, both for the welfare, mental and physical, of the patients, and for the increased facility with which they will find that patients will submit to necessary procedures.

Prevention of Hay Fever.

In the January 21st, 1899, number of The Journal of the American Medical Association, Dr. Alexander Rixa, of New York, contributed a very interesting article on "Prevention of Hay Fever." After a highly interesting historical review, and a brief survey of the results achieved in the past few years, the writer resumes the results of his own investigations.

His ingenious reseaches for a number of years, regarding the etiology of hay fever, lead him to admit that the pollen of the Roman wormwood, ragweed (ambrosia artemisæfolia) is the primitive and active cause of this peculiar disease. By inhaling these pollen he produced the symptoms of genuine hay fever. He writes as follows:

From the time I found the pollen to be the exciting cause of the disease, I concluded in a logical way upon the proper treatment. I conceived the idea of rendering the receptacle aseptic by preparing the soil for the reception of the pollen. Naturally, they will find no proper soil for a possible generation, propagation or development, destroying their existence in embryo, so to speak, and with it the real cause of hay fever. For this purpose I decided on the following treatment:

About two weeks before the onset of the disease I commence to irrigate or sterilize the nasal cavity and the post-nasal spaces with a harmless antiseptic solution, using the douche and atomizer. After giving a great number of antiseptics a fair trial, I decided on Hydrozone as the most innocuous and most powerful germicide. Hydrozone is a 30-volume aqueous solution of peroxide of hydrogen. At the beginning I use it for irrigation diluted in the proportion of one ounce of Hydrozone to twelve ounces of sterilized water. Nearing the period of the expected onset of the disease, I increase the dose to two or three ounces of Hydrozone, to twelve ounces of the sterilized water, according to the severity of the disease, using the douche, either tepid or cold, four times a day—morning, noon, evening and at bedtime—while during the intervals I use the atomizer, with a solution of Hydrozone and pure glycerin, or sterilized water, one to three, thus keeping the nares perfectly aseptic during the entire period, and preventing the outbreak of the disease in consequence thereof.

In most obstinate cases, when there is still some irritation in the nasal cavity, I give as an adjuvant, the following prescription:

℞ Acid boracic, gr. xx.
Menthol, gr. iv.
Glyco-thymoline, ʒ ij.
Sol. eucain B. 4 per cent., q. s. ad ʒ ji.
Sig. Use in atomizer.

As a rule this treatment was sufficient to avert the disease and keep the patient in perfect comfort.

Chlorin Water in Typhoid Fever.

The chlorin water treatment of typhoid comes from India. The usual dose is a drachm every three hours. Wilcox, according to the New York Medical News, makes the following statements:

(1) Chlorin can be safely used till complete disinfection of the alimentary canal is obtained.

(2) It improves the appetite and digestion, lessens the fever, and cleans the tongue. The only odor to the stools is that of chlorin.

(3) It causes increase of strength and lessens the nervous symptoms.

(4) It shortens the duration of the disease and under its influence the patient usually makes a rapid and complete recovery.

Some Fallacies of EARLY Infant Feeding.

IT is commonly supposed that a young infant may be fed on any mixture of cow's milk with or without one of the many advertised farinaceous foods. Physiological research tells us that not until the child is nearly six months old is it capable of digesting starchy food, and that during these early months it has little power to assimilate the casein of cow's milk. The practical truth of this statement is shown in the terrible mortality of young infants from diarrhœa and disorders of the alimentary canal—conditions due alone in the majority of instances to irritating, indigestible food and bacterial contamination.

IMPROPER FOODS in common use during the First Six Months

Condensed Milks

Which are deficient in fat and soluble albumen, contain an excess of sugar, and that not milk-sugar. This class of foods is therefore not only highly indigestible, but also below the normal in fat-forming constituents.

Farinaceous Foods

Containing unaltered starch, are inadmissible, as the infant is given work to do which it cannot perform; and the additional fact of these necessarily being made with unaltered cow's milk renders them still more indigestible.

Cow's Milk and Barley-Water Mixture

Is perhaps the least harmful, but is not a perfect food in that it contains too much casein, too little fat and albumen, and generally swarms with bacteria. Its reaction, moreover, is uncertain, and, though the presence of the barley-water mitigates the formation of large and indigestible curds, it is itself by no means suitable for the infant economy.

PROPER FOODS to be used during the First Six Months

Should be, as nearly as possible, the physiological equivalent of human milk. This principle **ALLEN & HANBURYS** have carried out in the preparation of their **"ALLENBURYS" No. 1 and No. 2 MILK FOODS.** These not only provide a perfect humanized food, but the addition in the No. 2 Food of certain constituents affords a proper progressive dietary to meet the developing functions of infant digestion

THE

"Allenburys" Milk Food, No. 1,

For use from Birth to Three Months.

Is prepared in the form of a dry powder, and is made from cow's milk, from which, after the proximate composition has been ascertained, the excess of casein is removed, and the deficiency in fat (cream), soluble albumen, and milk-sugar corrected. The method of preparation renders this Food sterile, and *boiled* water alone is required in preparing it for use.

Infants reared by hand should be brought up on this Food until they are three months old.

THE

"Allenburys" Milk Food, No. 2,

For use from Three to Six Months.

About this period (three months) it is found that the infant requires, in consequence of the development of the digestive organs, a somewhat more sustaining form of nourishment. This is best obtained not by increasing the amount of indigestible material, as is usually practiced, but by affording in addition to the milk a digested food

This Food contains, besides the constituents of the No 1 Food, maltose, soluble phosphates, and albuminoids derived from whole meal. There is, however, no unconverted starch left in the Food, which at this age the infant would be unable to digest.

A Sample of any or all of the Foods, and full descriptive pamphlet, will be sent free to any physician upon request. Address 82 Warren Street, New York.

Please specify on prescription the NUMBER of the Food desired,

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Insufficient Menstruation,

Dunn (Am. Journal Obstetrics). They appear to be due to a lack of proper functional activity of the glandular structure of the uterus and adnexa.

Anything that will stimulate the functional activity of these glandular structures will increase the menstrual flow and give more or less marked relief.

Direct stimulation of the endometrium and muscular structures of the uterus, by stimulating the terminal nerve filaments and conveying an awakening impulse to the ganglia in the uterus and adnexa, is the surest means of relief.

This stimulation should be only such as is necessary to give relief to symptoms.

Unless there be something in the uterus requiring removal, a sharp curette should never be used.

The difficulty of effecting a cure increases in direct ratio with the amount of injury done to the endometrium.

Judging from one case, stimulation, such as described, will relieve symptoms at any time between periods without producing at the same time any flow of blood.

If this conclusion should prove true in a series of cases we should be justified in believing that the amount of the menstrual flow is in itself of no particular moment except in so far as it indicates a normal activity of the glandular structures of the reproductive organs.

If the symptoms enumerated and the suffering endured by subjects of insufficient menstruation are due to insufficient functional activity of glandular structures rather than to an insufficient flow of blood, is there not at least a strong probability that they are the result of a form of toxemia?

Ergot in Hemorrhage.

F. A. Packard (Merck's Bulletin) points out that in hemorrhage ergot, of all other drugs, is the very one that should not be used, as it is the most active in lessening arterial capacity and increasing blood-tension. The object in hemorrhage should be to increase the coagulability of the blood so as to favor the formation of a clot. This can be done by local applications such as the topical use of witch-hazel in epistaxis, the inhalation of turpentine in hemoptysis, the administration of tannic acid in hematemesis, or of lead acetate in hemorrhage of the bowels. Calcium chloride can be given internally to increase the coagulability of the blood. Mechanical disturbance of the clot can be prevented by checking peristalsis and cough with opium, blood-pressure lessened by saline laxatives, where permissible, hot foot-baths, ligature of extremities, and the administration of veratum viride, or nitro-glycerin. R. W. Wilcox, commenting on the above, says that for hemoptysis, calcium chloride and tincture of aconite given alternately are generally efficient. Aconite, he says, is better than veratrum in being more easily managed, less irritating to the stomach, and quite as efficient.

Elegance in pharmacy often will achieve a success for the physician which is unattainable by even the greatest ability or pains—taking care on his part. Particularly is this true in pediatric practice. When one intestinal astringent can be given in a pleasant and palatable solution, whilst another also with desirable therapeutic action is unsightly and distasteful, there certainly is no question as to which should be chosen. For these reasons a soluble form of bismuth known as Bisol is a most desirable drug at this time of year, in the treatment of the numerous gastro-intestinal disorders of the little ones. It is a salt, virtually harmless, which is prescribed in smaller doses than the older series of bismuth salts (3–7½ grains) and has the additional advantage of forming a perfectly clear solution in water. It has been found highly efficacious also in the diarrhœas of typhoid, of dysentery and of phthisis. In gastralgia and vomiting it is of the greatest service. By adding tannin to a solution of Bisol there may be prepared a moist tannate, or a salicylate of bismuth much stronger by far than the usual forms of these drugs in that they contain more tannin or more salicylic acid and besides seem to possess a power which may be compared to that of a substance in the nascent state.

We wish to call the attention of our readers to the superior merits of the Patent Adjustable Double Slip Socket Artificial Leg, as manufactured by the Winkley Company of Minneapolis, Minnesota, now the largest establishment of its kind. With this leg a perfect fit can be secured without the patient leaving home. Their large 1899 catalogue, giving full information, will be sent free upon application by mentioning our Journal.

I have prescribed "Maltine with Coca Wine" with great benefit as a general tonic and to counteract the prostration incident to intestinal hemorrhage from severe internal piles. No other preparation of many used has offered such relief as "Maltine with Coca Wine."

Louis W. Dunavan, M. D.
Chicago.

IT IS IMPORTANT

For the dispensing pharmacist to recognize the right of the physician to dictate, not only what remedy he shall use in a given case, but whose preparation he prefers, for the quality of the medicine is often as much a factor in the cure of disease as a correct diagnosis.

Most druggists appreciate this fact, some are indifferent to it, A few ignore it, specification is therefore a necessity.

Syrup Albuminate of Iron.

An organic compound of Iron, representing in a purified and soluble form the albuminate and salts (phosphates) present in the blood. It contains 0.7 per cent. metallic iron in a form readily absorbed and is very efficient in medicinal action. This combination of iron approximates the natural forms in which the metal is present in the animal system, and possesses a marked value in anemia and chlorotic neurasthenia where prolonged administration of iron is indicated. It is not only free from all tendency to cause digestive disturbances, but is of positive value in these conditions during convalescence. One part of this syrup represents about fifteen parts fresh bullock's blood.

Cordial Pas-Carnata-Merrell.

DARTMOUTH PHARMACY, ESTABLISHED 1798.
L. B. DOWNING, Box 444.

"BY ALL MEANS TRY IT."

HANOVER, N. H., July 17, 1895.

WM. S. MERRELL CHEMICAL CO.:

GENTS:—In June I ordered your Fl. Ext. Passion Flower, as an experiment, for a son of 12 years, who has made very rapid growth, and was at the time very nervous, and several physicians had tried in vain to help him, one an uncle in whose family he staid for a month. My wife **happened** to see your circular on Pas-Carnata, and on consulting the doctors who had treated him, they said, "by all means try it."

The result was truly marvelous.

There was a change for the better in four days. Facial and shoulder muscles were twitching when we commenced using it. In a few days they disappeared, and on 15 drop doses three times a day he keeps all right, apparently.

I shall speak a good word for the medicine, as I have already done. Will you please send me some circulars to give to my physicians? Very truly yours, L. B. DOWNING.

NATURAL---FROM OIL OF WINTERGREEN.

TRUE SALICYLIC ACID in Crystals--Merrell.

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The investigations of Professor Latham (Cambridge, England), confirmed by Drs. Charteris and MacLennon (University of Glasgow), warn the profession against the use of artificial acid of commerce and its Sodium salt.

They conclude that **Commercial Salicylic Acid** AND ITS **Sodium Salt**

- are slow, but certain poisons.
- produce symptoms closely resembling delirium tremens.
- patients become delirious.
- dangerous to human life.
- have to be watched and not to be trusted.
- retard convalescence
- should not be administered internally, however much they may have been dialized or purified.

For internal use the true Salicylic acid and its Sodium salt should only be dispensed.

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Toxicodendron Poison.

Dr. M. Herschel Wheeler, of Butler, Ky., thus reports a very remarkable case of Toxicodendron poison following erysipelas.

Case 1. The patient a gentleman, was about convalescent of a very severe case of erysipelas when he came in contact with a poison oak vine. When I called to see him his face was swollen nearly beyond recognition, and he was suffering intensely. Not having with me what I called nearly a specific in said trouble, but instead a two ounce jar of Unguentine, this I applied freely, and after a short time he said: "Doctor. I feel so much better. I am very thankful to you. What is that preparation you are using? I want you to make me a large box of it."

Suffice it to say, the third application made a cure.

Case 2—Was a case of Urticaria in an aged lady. You know I presume the agony one endures with urticaria, and many times has it baffled my skill to check it. After having the patient sponged with an antiseptic solution, Unguentine was applied freely which gave her some relief. This treatment was continued until the case was cured.

"I believe Unguentine will be the ideal ointment in the near future in both skin diseases and as a surgical dressing, and I cannot thank you too much for your kindness in calling my attention to your valuable preparation."

Forcible Straining of the Spine to Correct the Deformity of Pott's Disease.

A. M. Phelps (Post-Graduate for February, 1899,) says the question of forcible straightening of spinal curvatures occurring in tuberculosis of the spine has been recently revived from an old practice, as old almost as the history of medicine, revived and practiced by Hippocrates 500 years B. C., and again revived in the sixteenth century by Pere.

That ankylosed spines of old standing, with a large kyphosis, should not be operated upon. Cases with large abscesses should be avoided. Cases of osteomyelitis after the abscess has been evacuated would promise more than tubercular cases. The cases in which he would expect to have good results are beginning kyposis, cases of recent standing, cases unattended with abscesses, or cases in which the abscess had already discharged, in which a small kyphosis was present, all cases of beginning paralysis or even advanced cases with paralysis, not due to invasion of the spinal canal by the disease. Cases of lumbar disease are more favorable than dorsal.

The indiscriminate work which will be done in the future by individuals incapable of selecting their cases or actuated by other motives will relegate the operation to the obscurity in which it has slept for more than twenty-four hundred years.

That the operation is a useful one and will save many a child from a crippled life and a premature death the author has not the slightest doubt, and as time goes on the profession can speak from their ripe experience and formulate rules which will be infallible guides to scientific work. By doing as has already been done, and is being done, in some of the diseases and deformities classified as orthopedic, empiricism and charlatanism will be stamped with an appropriate brand.

A physician of extensive practice who has devoted many years to the study of respiratory troubles writes that he believes he has found the most reliable treatment yet devised for obstinate bronchitis: "My sister, Mrs. M., had been under treatment during ten years for chronic bronchitis without definite improvement. She was extremely weak and emaciated and had frequent paroxysms of coughing with copious opaque yellowish expectoration streaked with blood. There was pronounced angina with a sense of weight and tightness across the chest. About six weeks ago I begau administering a Petroleum Emulsion made by the Angier Chemical Company of Boston, in teaspoonful doses mixed with two ounces of milk. In three days the cough entirely vanished, and the pulse became full and regular. In six weeks she has gained eighteen pounds and declares herself cured. This is only one case among many."

Local Application.

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Medical Schools of the United States.

Regular, 128; homeopathic, 20; eclectic, 8; physio-medical, 1; total, 157.

Session open about 1 O and closes about 1 My.

Matriculates, 1897–'8, 12,905; graduates, 1897–'8, 2,720; matriculates, 1898-'9, 7,-911. (These items are partial results only.)

Fees: average matriculation, $5.17; average course, $74.74; average additional expenses, $29.19; total $109.10.

Faculty: professors, 2,506; lecturers, 516; others, 1,907; total, 4,929. (Partial results only.)

There are no uniform admission and graduation requirements for the United States. Of the 55 political subdivisions in the United States the relations of four are so recent that present conditions are unknown and no reply to statements based on former conditions has been received. Of the remaining 51 political subdivisions the following have no medical schools: *viz.*, Alaska, Arizona, Delaware, Florida, Idaho, Indian territory, Mississippi, Montana, Nevada, New Jersey, New Mexico, North Dakota, Oklahoma, Rhode Island South Dakota, Utah, Washington, West Virginia and Wyoming.

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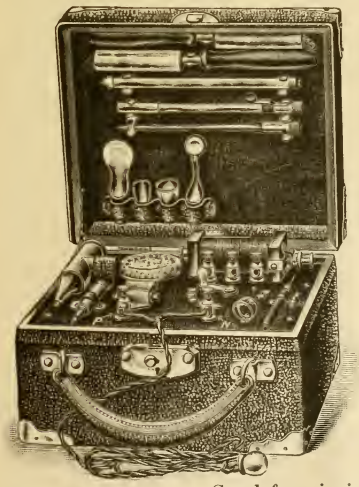

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Sewer-gas Poisoning.

According to "Treatment" cases of sewer gas poisoning can be divided, as is well-known, into two categories—those of sudden onset due to asphpxia from sulphuretted hydrogen or deficiency of oxygen, or from both of these causes, and those cases of illness which, in all probability, are due to infection by micro-organisms of various kinds in sewage.

Work in sewers is not such an unhealthy occupation as might at first sight be supposed, for the air in sewers where the sewage is in movement is not so very impure, and one knows clinically that it is rare for sewer men—once they have got used to the work—to come under medical observation for any illness which might in any way be attributed to the nature of their employment. But if sewage be stagnant and decomposing there is an enormous production of micro-organisms, which may infect the neighboring atmosphere and be a fruitful cause of disease.

Dr. F. H. Edgeworth describes (Bristol Med. Chir. Jour., March, 1898,) several cases in men who, although accustomed to work in sewers, were taken ill whilst excavating ground which was soaked with decomposing sewage and gave off a most offensive smell. Illness due to sewer-gas poisoning may be of various kinds and severity; general ill-health without any obvious lesion, feverish attacks, tonsilitis, gastro-intestinal affections, and nephritis are no doubt the commonest. Mr. W. Gifford Nash, F.R.C.S., narrates (British Medical Journal, January 28, 1899,) four series of cases of sewer-gas poisoning in which streptococci and staphylococci developed a variety of symptoms in the persons attacked.

Boracic Acid in the Preservation of Milk.

Boracic acid is claimed to de an excellent and harmless preservative of milk, and in the quantities necessary to preservation (*i. e.*, according to the length of time for which it is desired to preserve the milk) its presence cannot be detected, either by the sense of taste or smell. Five grains to the gallon will preserve the milk from one to three days, according to the care exercised in the cleaning of the containing vessels, the temrerature, &. It is somewhat surprising that this innocuous substance should have acquired an evil reputation on the public mind. It is stated on good authority that although vague statements about it of an injurious nature have from time to time been spread by its opponents, not a single instance of injury to health by boracic acid has been substantiated. With in the last three months Dr. C. Liebreich, director of the Royal Pharmaceutical Institute in Berlin, said, at the instigation of Prof. Virchow he had carried on a long series of experiments with boracic acid and had convinced himself that it was admirably adapted as a food preservative, and in the quantities necessary for that purpose it was quite harmless He added that neither in actual practice nor according to authoritative literature has a case been known, so far as he was aware, in which food prepared or preserved with borax or boracic acid had exercised a deleterious effect on the health of any individual.

Sanmetto in Cystic and Urethral Irritation and Inflammation, and in Chronic Prostatic Hyprotrophy and Atrophy.

I have for years prescribed, as well as taken myself, Sanmetto, and have found it almost uniqersallp satisfactory in cystic and urethral irritation and inflammation. I have also used it with marked results in chronic prostatic hypertrophy, and even in atrophy of the prostate I have found it useful.

W. A. Foster, M. D.

Kansas City, Mo.

Alcohol and the Russian Death Rate.

An official inquiry into the comparatively large increase in the Tartar population in the city and government of Kazan has, according to the "Kamsko Volshki Krai," brought out some remarkable facts as to the effect of alcoholic indulgence on the death-rate. The Kazan Tartars, numbering about 640,000, have a rate of mortality of only 21 in 1,000, while the mortality among the Russians is 40 in 1,000. The general conditions among orthodox Russians and Mohammedan Tartars are practically the same, except in so far as personal habits are concerned. The medical investigation leaves no room for doubt that the lesser mortality of the Mohammedan Tartars is directly due to their abstinence from spirituous liquors, in which the Russians indulge freely.

Sanmetto in Genito-Urinary Diseases and as a Re-builder.

I have used Sanmetto in a great number of genito-urinary diseases, also as a re-builder of strength throughout the genito-urinary tract, always with the happiest results. This is the first and only testimonial I have ever given in twenty years active practice of medicine.

C. H. Eckert, M. D.

Marion, Ind.